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THE MARYLAND FARMER:

DEVOTED TO

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GREEN MANURING---CLOVER, PEAS, BUCK- WHEAT---CORN.

All cultivated lands require to be resupplied according to their need with those natural and inherent constituents of fertile soils which are absorbed by the growing plant and carried off in successive crops. Upon this depends its productive capacity for a long series of years. The best manures are, therefore, those that abound in certain mineral and vegetable substances, in that state in which they are most readily taken by the growing plant. It would be teaching the simplest elementary principles of farming for us to say anything here concerning the merits of barn-yard manure, guano, or bone dust—but the value of green crops ploughed under as forming an easily accessible and highly beneficial fertilizer, has never yet, we think, been regarded by the generality of our farmers with the importance it deserves. The beneficial influence of green crops turned under is much better understood and appreciated in Europe, and especially among the thrifty Germans, than it is with us. By this method the sandy wastes of Belgium have been converted with but little assistance from other kinds of manures into a fertile loam. The farms there are for the most part divided among small proprietors, and, as they scarcely exceed fifty acres, they are easily worked, and by patient industry, and by the shrewd adaptation of means to ends, each farm has been cultivated almost to the perfection of a garden. The Belgians, and to a large extent their neighbors of Holland, have been taught by that best of all teachers, practical experience, that green plants ploughed under will give, with the exception of ammonia, all the constituents necessary to enrich the soil upon which their crops are grown. Of these constituents one-third may be derived from the soil itself, and to that extent are merely returned to it in the green crop that is ploughed under, but the remaining two-thirds are drawn from the atmosphere, and are, therefore, clear gain.

There are quite a variety of green crops which might be made useful in a course of renovation, but the chief crops for this purpose, which are adapted

to general use by our farmers, may be limited to four. These are, 1st, clover; 2d, field peas; 3d, buckwheat; 4th, broadcast corn. Of these four the first on the list, and the first in point of excellence, is clover, and next to clover the field pea, commonly known at the South as the cow pea. In an exhaustive treatise on this subject to be found in the Report of the Agricultural Department for 1864, the relative values of different green crops when ploughed under in the process of renovating soils more or less exhausted by too frequent cropping is very clearly presented. We propose to draw from this source such points in a condensed form as are most worthy of attention, and we also propose to show at the same time, by comparative statements, why this mode of manuring is beneficial to the soil, and enables it to bear heavy crops of wheat and corn and rye and oats and barley on lands that previously failed to produce them remuneratively.

The value of the red clover for manurial purposes consists in the fact that when decomposed it contains all the constituents that enter into the production of a crop of wheat, as the following analysis of clover as compared with wheat will show:

	<i>Red Clover 100 parts.</i>	<i>Wheat.</i>	<i>Straw.</i>
Potash.....	36.45	30.02	17.98
Soda.....	0.00	3.82	2.47
Lime.....	22.62	1.15	7.42
Magnesia.....	4.08	13.39	1.94
Oxide of Iron.....	0.26	0.91	0.45
Phosphoric acid.....	6.71	46.79	2.75
Sulphuric acid.....	1.35	0.00	3.09
Silica.....	1.95	3.89	63.89
Chlorine.....	3.92	....	....

It will thus be seen that clover contains a large proportion of lime, potash, magnesia, phosphoric and sulphuric acid and chlorine, all of which are substances that enter largely into the composition of wheat. Another advantage of clover is that it sends its tap roots deep into the soil and by its succulent stems and broad leaves it protects the soil it covers from evaporation, and thus adds considerably to its fertility by the mere shade it affords, just as ground covered with rough fibrous material becomes fertile from the mere fact of being so covered and from the retention of moisture which is a consequence of it. The wheat and corn grown on clover

lays are generally less liable to disease, and the grain is of better quality than that grown under the stimulus of stable manure, whilst a good crop of clover turned under furnishes to the soil as large a quantity of fertilizing substances as ten or twelve loads of rich and well rotted manure from the barn-yard, whilst there is no expense incurred in hauling or preparing.

Mr. Wolfinger remarks that the best mode of treating clover is to let the first year's growth fall and decay on the ground, or it may be pastured lightly in the fall of the year. The second year the first crop may be cut for hay, and after the second crop is topped for seed the residue may be turned under. He suggests, however, that the second crop may be ploughed under after it has partially ripened its seeds, by which means a full supply of seed will be deposited in the soil for future growth. We object to either of these processes. If the object of growing clover is to renovate the soil, it should be reserved in its entirety for this special purpose; we would not turn a hoof on it; we would not put a scythe into it; we would let the crops of the first year fall and cover the ground, and those of the second year we would likewise leave untouched until the seed was formed and the stems began to turn brown. Then and then only we would put the plough in and turn all under together. The objection sometimes raised that green crops turned under sour the soil would thus be obviated, but a decided advantage would be gained, and all apprehensions of any such result set at rest if, before ploughing under, the field were broadcasted with ten bushels of lime to the acre.

Next to clover in point of value as a crop for turning under is the field pea—which in its haulms and stalks contains—like clover—"a very large proportion of lime, potash, carbonic acid and chloride of sodium, besides considerable quantities of phosphoric and sulphuric acid, magnesia, soda, &c." The advantage of peas is that they can be grown on lighter soils than clover, and, therefore, especially in the case of the cow pea, are preferable in the sandy soils of the South to clover, which rarely grows well there, and frequently fails altogether.

Mr. Ruffin—and the South had very few more experienced agriculturists than he—expressed the opinion that the cow pea was "even better than clover as a preparing and manuring crop for wheat." However this may be north of the Potomac, it is certain that south of that line it is very highly esteemed, and that its merits deserve it should be better known to agriculturists generally.

After peas we rank buckwheat as a good crop for turning under; it grows rapidly, is largely benefited by plaster, and if, on the poor soils on which it is proposed that it shall be used, a few bushels of lime or wood ashes are broadcasted previously to

seeding down to buckwheat it rarely fails to grow vigorously. The straw of buckwheat "contains considerable quantities of lime, magnesia, potash, soda and phosphoric and sulphuric acid," and as it will grow with more or less vigor on almost any soil, and will make a moderate stand where even clover would fail, it constitutes the best green crop wherewith to commence the process of renovation by a course of green manuring. After one or two crops of buckwheat have been turned under, clover or peas may follow with the certainty of a good stand, and when these are also given to the soil, its restoration to a good state of fertility may, with judicious management, be regarded as certain. Of course the result aimed at may be hastened by the addition of such manures as can be spared from the barn-yard, even though the quantity is small, and especially by furnishing the soil annually with a few bushels of lime or ashes to each acre that is subjected to this inexpensive mode of improvement.

Finally, there is broadcast corn. But to obtain a heavy crop of broadcast corn presupposes the land already in good condition, whilst a light crop has by no means so beneficial an effect on the soil as either of the three crops previously mentioned.—Moreover the broadcast corn turned under, except in soils where lime naturally abounds, will most assuredly, in the process of fermentation, sour the land. It is, therefore, the least desirable of all the renovators we have named. Were we about to commence the improvement of a very poor piece of land we should commence with buckwheat, aided by a small quantity of wood ashes. Two crops of buckwheat might be grown in one season. Both of these we would turn under. Leaving the land fallow through the winter, we would break it up the ensuing spring and seed the cow pea, following this in due succession with clover.

HOW TO RAISE EARLY POTATOES.—A correspondent of the *German town Telegraph* thus gives his method of raising early potatoes: "I thoroughly plough the ground as early as the spring will permit, put it in a nice condition, and strike out the rows the same as corn, three feet apart and shallow. Then drop the seed about fifteen inches apart and cover with a hoe; about one inch deep is sufficient to keep out frost, and the heat of the sun on the surface soon sprouts the potatoes. I generally grow Buckeyes for early potatoes. There may be earlier varieties, but not so good. Last season I used them continually from the 8th of June, and that was before there was any potatoes in the market, except a few from Norfolk. I don't want any long manure about my potatoes; would sooner have none. This plan of raising potatoes is equally good for the late ones, on stiff or wet lands."

COUNTRY vs. TOWN.

It cannot be questioned that of late years the larger towns have been increasing in population at the expense of the rural districts, and that there is less inclination for agricultural pursuits among the rising generation than there was formerly. This change, which is by no means a desirable one, has had its origin in part in the facilities afforded by steam transportation, and in part to the greater attractions which large cities present to young persons fond of bustle and excitement. Moreover the labors and anxieties of a farmer's life have been greatly increased by political causes and by the radical changes which those causes have produced in the labor system of the Border States, where the influences at work to bring about this disruption of the former relations between master and servant were more severely felt during the past five years than in States farther South. But the gravitation of the rural population toward the larger cities, since the introduction of railroads and steamboats, has been felt not only in this country but also to an equal extent abroad. The city of London has nearly doubled its population from this cause, and if the increase has not been so great with respect to Paris and in the German States, it is because the lands are held there principally by small proprietors who furnish for the most part the labor of cultivating them within their own families. It may be doubted, nevertheless, whether those who seek large cities in search of employment are on the whole benefited by the change—whilst it is certain that the country districts suffer materially from this annual system of depletion.—The great want of the country is field hands. Those that were formerly employed in our State in all the operations of the farm were, in eight cases out of ten, negroes brought up to the work, and perfectly competent, under judicious supervision, to do it well. Many of them, however, seem to have become impressed of late with the idea that every species of field labor is degrading, and that one of the chief blessings of their newly conceded liberty is to do nothing at all, or, where necessity obliges them to forego that luxury, to do as little as possible. Another fixed notion of the "freedman" is that the only earthly place in which he can attain to an almost paradisaical state of happiness is in a populous town, where he lives a desultory life, working little, charging enormously for the little that he does, and herding with associates who neither improve his morals or benefit his honesty. These various causes, the exodus of the younger members of the white population, and the abandonment of their accustomed pursuits for the more tempting life of cities by many of the blacks, are quite deserving of consideration. Where the country population is dense, as in Eng-

land and France, the loss of those who become inhabitants of cities is not greatly felt. Indeed it is, in many cases, a relief rather than an injury, as it gives to those remaining behind steadier employment and better wages than they could obtain when the competition for work was greater. With us, however, the case is different. The number of farm laborers has never been so great that any of them could be spared, and now that a steady decrease of that class of population has set in, the difficulty of obtaining even indifferent field hands is very sensibly felt. It is felt, moreover, that the negroes cannot be induced to settle down as a rule to steady employment, and that the old system of farming must be modified to meet the new system of labor. How this is to be done is the question. We do not ourselves believe that the troubles of our farmers from the causes enumerated are likely to end soon, but we think, nevertheless, that when the excitement engendered by the revolution through which we are now passing is abated, more attention will be paid to agricultural affairs, and the better prices obtained for the products of the soil will bring about a reaction in favor of a country life and of farming pursuits that may be made profitable, and that a fresh supply of labor will then gradually be found to meet the increasing demand.

Quantity of Seed Per Acre.

We give the following for reference :

Grain Drilled.—Wheat, $1\frac{1}{2}$ to 2 bushels; rye, $1\frac{1}{4}$ to $1\frac{1}{2}$; oats, $2\frac{1}{2}$ to 3; barley, $2\frac{1}{2}$ to 3; barley and oats, 1 bushel of oats to 2 bushels of barley; peas, 2 to 3 bushels; buckwheat, half to two-thirds of a bushel; corn, in hills, 6 to 8 quarts; in drills, for fodder, 2 to 3 bushels; broadcast for fodder, 3 to 4 bushels; broom corn in drills, half to three-fourths of a bushel; beans, 1 to $1\frac{1}{2}$ bushels; sorghum, half to three-fourths bushel.

Grasses.—Timothy, 8 to 12 quarts; orchard grass, $1\frac{3}{4}$ to 2 bushels; red-top, 12 to 16 quarts; Kentucky blue grass, 2 bushels; white clover, 4 to 6 quarts; red clover, 6 to 8 quarts; millet, half to three-fourths bushel; lucerne, 8 to 10 pounds.

Vegetable and other Seeds.—Beets; 4 to 5 pounds per acre; carrots, 2 pounds; ruta-baga, three-fourths to one pound; tobacco, two ounces; cotton, 2 to five bushels; turnip, one to two pounds; onions, three to four pounds.—*Rural New Yorker.*

TO REMOVE INSECTS.—At a recent meeting of the Philadelphia Agricultural Society, Dr. Hall said that coal oil and water, with a small quantity of potash, mixed, was a good article to remove insects from vegetables. If this is so, it is a valuable fact; on the other hand if the mixture kills the plant it should be known as soon as possible.

Our Agricultural Calendar.

Farm Work for May.

With this month all the manifold operations of agriculture press heavily upon the farmer, for the work that is now left uncompleted cannot subsequently be done to advantage. It is better, therefore, to measure carefully the extent of the ability of the force of field hands available, and of the amount of manure that can be applied to the soil and to regulate the work accordingly. On poor soils, at the present high rate of wages, it is labor lost to cultivate large tracts of land. A far better plan is to concentrate all the labor and all the available manure upon just so many acres as can be tilled in the best possible manner, and after getting these down to grass, to proceed in the same way with the rest of the farm. Every acre restored to a high state of fertility furnishes additional means for renovating other acres, and thus, by a gradual process, the entire farm may, in the course of a few years, be put in excellent condition. This process may be hastened to a considerable extent by seizing the opportunity, in leisure times, of increasing the stock of manure by collecting materials for composts and by turning under green crops. But the best evidence of good farming is that no land shall be cultivated which does not bring reasonably good crops, whilst the best crops that are grown can only be produced when the tillage is thorough and the manuring liberal.

PLANTING CORN.

We have already given, in previous numbers of the *Farmer*, full and explicit directions for the cultivation of corn; but now that planting is about to commence in this latitude, it may be proper to recapitulate the chief points to be observed: For a heavy crop of corn the ground should either be rich naturally or should be made so by a liberal application of manures and fertilizers. The best soils are alluvial bottoms, well drained of superfluous moisture, and next to these, fertile sandy loams. The stiffer the soil the more completely it should be worked over and broken down, as thorough pulverization is essential to the successful cultivation of this crop. The soil should be deeply ploughed, wherever the subsoil is of a nature to admit of it; and this for two reasons: First, because deep ploughing increases the amount of plant food thus made available for the wants of the growing plant; and next, because the deeper the soil is stirred the more capable it is made of storing up a supply of moisture for the uses of the growing plant during a period of drought. This rule will not, however, apply in cases of light sand, unless the subsoil there is

of a more compact texture, when deep ploughing will prove of decided advantage. In the matter of manures and fertilizers, they cannot be too freely applied, for corn is a gross feeder, and if the cultivation is skilfully managed will amply repay the cost of liberal manuring. If commercial fertilizers are used, choose those which contain a large proportion of soluble phosphates in preference to pure Peruvian guano, as the latter, by its excess of ammonia, whilst it promotes a vigorous growth of stalk and leaves, has less effect upon the production of grain into which the phosphates enter largely.

Chequering Off.—If the land is very rich naturally, or has been made so, the rows may be laid off three feet by four apart, and three stalks left in each hill. If, however, it is only moderately fertile, four feet apart will be about the right distance, and two stalks to each hill.

Manuring in the Hill.—The custom of manuring corn in the hill cannot be defended, except in cases where the supply of manure is very short and the land too poor to bring a crop otherwise. A field manured in this partial way, unless it is improved by a regular and systematic application the ensuing season, will only produce a buncy crop, yielding but a meagre product. When, however, a field has already been broadcasted, either with phosphatic guano or barn-yard manure, the plant may undoubtedly be pushed forward in the earlier stages of its growth by a small quantity of manure or compost or guano deposited in the hill, whilst the bunchiness so distinctly visible in the old system of manuring in the hill solely will be thus, to a very great extent, avoided.

After Culture.—Keep the shovel plough and cultivator running alternately through the rows lengthwise and across until the soil is thoroughly stirred and is made as light as possible. Use the hoe about the hills to keep down weeds, and steadily pursue this practice until the corn is sufficiently advanced to allow of its being laid by for the season.

OATS.

It is very possible, owing to the backwardness of the season, that the seeding of this crop may have been delayed. In the generality of instances, however, we do not doubt that the work has not only been completed, but that the plant is up and well advanced. Should, however, it be still necessary to put in a crop, no time is to be lost in putting the soil in the best possible condition and seeding down at once.

PUMPKINS.

As pumpkins constitute an excellent winter food for stock, and when cut up and dusted with meal cause cows that would fall off in their milk upon dry provender to yield milk quite freely, it is a good practice when the land is rich to plant pumpkin

seed in the corn hills at intervals of from twelve to twenty feet apart. Where this is not advisable, select an acre of ground and prepare it especially for this excellent stock vegetable. Plough and harrow it well, and then lay off shallow furrows ten feet apart each way. Where, the furrows cross each other deposit a shovelful of rich manure or a handful of guano, draw the soil over it with a hoe, making a flat hill about three inches high. In each hill plant some half a dozen pumpkin seed, three inches apart and about two inches deep. When the plants come up, dust them of a morning, whilst the dew is on, with a mixture composed of half a bushel of plaster, one peck of soot, one pound of Scotch snuff and one pound of flour of sulphur, to get rid of the striped bug, which is apt to do injury to the young vines.

After Culture.—Thin out the weakest vines when they come into rough leaf, leaving three of the more vigorous to each hill. Keep the hills clear of weeds with the hoe, and the intervals light and clean with the shovel plough and the cultivator.

MILLET.

Very few farmers cultivate millet, because of its tendency to shatter its seeds, and also, perhaps, from an erroneous opinion of its value as a fodder plant. Yet in cases where the hay crop is likely to be deficient, millet offers a good substitute, and will be found to make excellent provender. In a soil that will produce heavy oats, millet will do admirably well, and will furnish a large amount of fodder to the acre. It may be sown broadcast on rich ground at any time between the 1st and 15th of May, at the rate of about three pecks of seed to the acre. Harrow the seed well in, and finish off with the roller.

Harvesting.—In harvesting millet begin to cut it before the top seeds become ripe, as they are otherwise very apt to shatter. In this case the loss from immature seed finds its compensation in the greater nutritiousness of the fodder.

CANTELEUPES AND WATER MELONS.

In the vicinity of large cities these delicious fruits may be very profitably grown for market; but in planting them great care should be taken to separate the melon from the canteloupe patch, as the seed would otherwise be very apt to mix.

Preparation of the Ground.—After deep ploughing and thorough harrowing, lay off the rows for canteloupes about six feet apart each way, and for melons ten feet apart. Where the rows cross each other drop a shovelful of rich manure, cover it with the hoe, and plant the seed as described for pumpkins. The after culture is also the same. It may be observed here, as a matter of some interest, that the canteloupe will grow vigorously on a soil which is much stiffer than that which is best adapted to the

growth of the water melon. For the latter a light, rich, sandy loam is to be preferred. To keep off the striped bug, dust the young vines with the mixture recommended for pumpkins.

ROOT CROPS.

For the cultivation of the various root crops we refer to previous numbers of the *Farmer*.

BROADCAST CORN.

As a means of making up for an anticipated deficiency in the hay crop, corn may be sown broadcast to advantage. On rich land it produces heavily. The ground should be well prepared for the reception of the seed, which should be sown broadcast at the rate of from three to four bushels of seed to the acre. After seeding, harrow the ground well and finish off with the roller.

SWEET POTATOES.

To bring forward the sweet potato plants rapidly the sets should be started in a hot-bed, and when they are ready to be drawn, a light, loamy piece of land should be chosen, which should be ploughed and harrowed until the soil is made very fine.—When this has been done, lay off the rows three feet apart each way as if for corn, and at the intersection of each row drop a fork full of well rotted manure, or sprinkle the sides with guano. Draw the earth together with the hoe and leave the hill slightly conical at the sides, but with a flattened top.—Make each hill about the size of a bushel basket, and plant on the top of it two sets to each hill. If the weather is dry, water freely after sunset until the sets take fresh root.

After Culture.—Keep the hills free of weeds with the hoe, and stir between the rows with a cultivator. Towards the close of July draw the vines carefully from between the rows, and throw fresh earth to the hills with the shovel plough. Follow with the hoe to shape and enlarge the hills, and where the cultivator has passed through the intervals, restore the vines to their original places.

TOBACCO.

This crop now requires careful attention.

DRAINING WET LANDS.

As soon as time can be spared from more pressing duties preparation should be made for draining marshy spots in fields under cultivation, and for opening ditches that have become choked.

CUTTING OF CLOVER.

The best time for cutting clover is when about half the heads have turned brown. Let it remain in swath for half a day, and then put it lightly into cocks to cure.

FALL POTATOES.

These should be planted about the middle, and certainly not later than the last week in the month. Full directions for planting will be found in previous numbers of the *Farmer*.

Garden Work for May.

We do not know that we can offer any better advice to those engaged in rural affairs than to urge upon them to pay special attention to their vegetable gardens. In the summer season, and especially in our hot summer climate, an ample supply of vegetables is absolutely essential to the health of the household—more vegetables and less meat, especially salt meat, should be the rule that should govern every family during the summer season, whilst in the winter the rule should be reversed. The food can scarcely be too nutritious in cold weather, and it should be of a kind that nourishes and enriches the blood. In summer the food should be light and of a cooling and purifying quality and whilst it should be good of its kind it should be easy of digestion. By attention to these simple rules a great deal of ill health arising from gorged livers and gross eating would be avoided. But in any case, and even as a measure of economy, a good vegetable garden in the country is particularly desirable and the earlier the vegetables can be brought to the table the more completely the general health of the household will be secured. We have given from time to time simple yet clear directions for making hot bed frames, and the construction of hot beds. These are so great an acquisition in forwarding the growth of young plants until such time as they can be transplanted to the open air that we trust their use has not been neglected. The garden work for the month is as follows:

Setting out Cabbage Plants.—As soon as the season is sufficiently advanced prepare in the best manner a plot of ground, for the reception of cabbage plants, manure it heavily, spade it deeply, and rake it thoroughly and well. After this is done lay off the land in rows three feet apart and at distances of two feet apart in the row, set out the young plants drawing them freshly from the seed bed for that purpose. Choose, if you can, a moist cloudy day for this work, but if the day is dry and the roots of the young plants are exposed at all, dip them in a bucket or other vessel containing a mixture of cow manure, fine mould and soot or ashes, reduced by water to the consistence of thick cream. After the plants are dibbled in dust them over with a compound of soot and sulphur, whilst the dew is on them of a morning, to protect them from the fly and the cut worm.

Sowing Cabbage Seed.—For Fall and winter use sow the seeds of early and late Cabbage from the 15th to the 20th of the month.

Parsnips, Carrots and Beets.—We have already given in the April number of the *Farmer* directions for the cultivation of these excellent and nutritious vegetables. We repeat however here that a light, deep loam enriched with well rotted manure is the

best soil for all kinds of tap rooted plants. Trench the soil deeply and make it very fine, after which sow the seed in shallow drills from nine to twelve inches apart and about half an inch deep. Thin out finally as follows: The carrots to four inches apart, and the parsnips and beets from six to eight inches apart.—The after culture of these roots is exactly similar. It consists in keeping them entirely free of weeds and frequently loosening the soil about them with the hoe.

Sowing Radish Seed.—Sow radish seed in a well prepared border at intervals of ten days during the month. The white turnip radish should now be preferred to the long red.

Lettuce.—Plant out Lettuce for heading and sow fresh seed every two weeks for succession.

Beans, Dwarf and Lima.—Sow a few rows of Dwarf Beans every ten days to follow in succession. Prepare a piece of ground, for Lima or Carolina beans. Check it off in rows six feet apart each way—and as soon as the ground is sufficiently warm make up the hills. Raise them a few inches above the surface of the surrounding soil but keep the top of each hill flat. Plant in each hill five or six beans at equal distances from each other and about two inches deep. Fix a straight pole from 10 to 12 feet long in the centre of each hill, and to a depth of two feet in the ground to keep them firm. After the plants are up work them well with the hoe and keep the soil loose about them throughout the growing season. If manure is placed in the hills it should be such as is well rotted.

Cymlins or Squashes.—Plant out Cymlins in hills four feet apart. The Early Bush is the best for family use. Gather them for the table when the skin yields freely to the pressure of the finger nail. The after culture is the same as that described for canteleupes in the columns on Farm Work printed elsewhere in this number.

Melons and Canteleupes.—See "Farm Work."

Cucumbers.—Make the hills for cucumbers six feet apart each way. Let the soil be nice and light and spade and pulverize it well. After forming the hills flatten them on the top and sow a few seeds in each. When the plants come up dust them with a mixture of soot, ashes, and sulphur to keep off the striped bug. As soon as the vines make their rough leaves nip off the terminal buds to make them branch out and also to throw them into earlier bearing. Leave but three vines to a hill. Keep the soil about the vines loose by frequent hoeing and the intervals clean.

Sweet Potatoes.—See Farm Work in this number.

Peas.—Drill in a few rows of marrowfat peas to succeed the earlier sorts. After the 20th of the month all peas that are seeded should be planted in a shady border.

Onions.—Thin out to stand four inches apart in the row. Keep the soil loose about the bulbs and slightly drawn from them.

Tomatoes.—Tomato plants that have been grown in a hot bed may now be pricked out and set in hills three feet apart. When they are about a foot high draw the earth to their stems and support the vines by a rough frame work of forked sticks and cross pieces. As soon as the vines have set their fruit pinch off the tops, to ripen the fruit more rapidly. Seeding in the open air may yet be done during the early part of this month. These later plants will furnish the main supply for fall and winter use.

Red Peppers.—Sow the seeds of Red Peppers during the first week of the month. Choose a warm border and a light soil. Transplant when large enough into good ground and let the plants stand a foot apart in the rows leaving a space of eighteen inches between the rows. Hoe frequently and earth up the stems as the plants advance in growth.

Egg Plants.—Set out Egg Plants from the hot bed about the 15th of the month, and sow some seeds in a warm border, for other plants to set out in June. The hills should be made two feet apart each way and in setting the plants they should not only be well-watered but should be kept shaded for several days. Keep them free of weeds and draw the earth to the stems occasionally as recommended for peppers.

Salsify or Vegetable Oyster.—Drill in a few rows of this delicious vegetable during the early part of the month. The soil and treatment required are in every respect similar to that demanded by carrots and parsnips.

Okra.—Drill in a few rows of Okra. Choose a moist rich soil. The tender pods are excellent for soups.

Endive.—Sow Endive for an early crop.

Parsley, Thyme and Sage.—Seed of all kinds of pot and medicinal herbs may now be sown.

Nasturtium.—Sow Nasturtium seed.

Watering.—Water freely in dry weather but only early after sunset.

TO DRIVE OFF RATS.—A correspondent of the *Country Gentleman* gives the following:

"Take a bunch of matches and soak them over night in a teacupful of water—then take out the matches, thicken the water with Indian meal to a stiff dough, adding a spoonful of sugar and a little lard—lay it about the premises, where the rats and nothing else will get it.

I have tried different kinds of exterminators, with poor success, until I tried this. Rats are now strangers about my premises, and make short stops when they call, and go away with a terrible squeak and a terrible griping in the stomach."

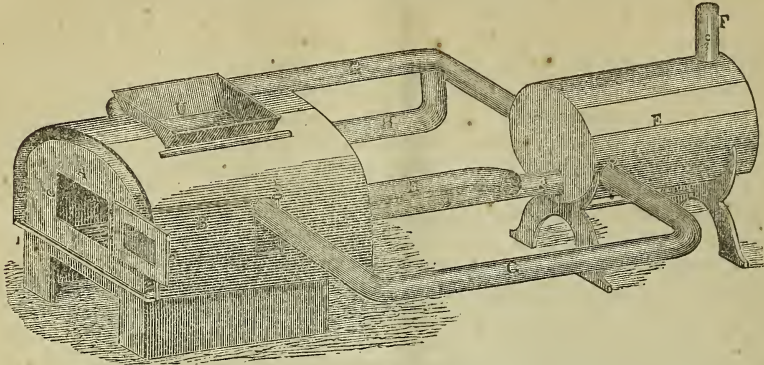
CULTIVATION OF WOOL IN THE SOUTH.

The increase in the wool of the United States from 1850 to 1860, was 8,064,385. The Southern States are better adapted to sheep husbandry than any portion of the world, and we would specially commend this branch of enterprise to the attention of their people. The idea entertained by some Southerners that the South is too warm for sheep to flourish, is entirely without foundation. Sheep have been bred on the Eastern Continent from the Equator to the 65th degree North latitude. The Merino has been bred in Europe as far South as between the 36th and 38th parallels of latitude, and as far North as Sweden. Sheep have flourished among the rice swamps of Florida and South Carolina, and are just as healthy as in the mountainous regions. Any part of Maryland or Virginia is admirably adapted for sheep raising. The whole South has a most decided advantage over other parts of the United States for the production of wool, in soil, climate, and abundance and variety of grasses.

The winter feeding of the most favored parts of the North averages 150 days, and costs, under the most favorable circumstances, 27½c. per pound, whilst in the Southern States it is not necessary to feed in winter, except under the most extraordinary circumstances. The Southern States, including those West of the Mississippi river, embrace an area of four hundred and fifty thousand square miles, or two hundred and eighty-eight millions square acres. The attention to sheep husbandry need not impair the cultivation of the Southern staples. The United States, before the late war, produced 578,012,173 pounds of cotton, more than half the crop of the whole world. The cotton crop of the world amounted to 1,000,000,000 pounds, which would require 4,000,000 acres. The four States of Louisiana, Mississippi, Alabama and Florida, contain 130,000,000 acres, and could alone supply the demand of all the markets in the world. After deducting all the land in the Southern States devoted to cotton, rice, wheat, oats, tobacco, &c. a balance is left of fourteen millions of acres which might be employed in sheep husbandry. The time has come when the South should make available every species of enterprise, and there is none more eligible, under present circumstances, than sheep husbandry.

CURIOUS EXPERIMENT.—Take a wine glass, fill it full of wine—see that you fill it drop by drop, with as much wine as it will hold, without running over. Then drop into the wine as many pins as the glass can contain, and the wine will not run over. Take a fresh wine-glass of similar size, pour the wine from the first glass into it, and you will have a glass full of wine and a glass full of pins.

Bibb's Improved Arrangement for Firing Tobacco.



FOR THE MARYLAND FARMER.

TOBACCO FIRING AND CURING APPARATUS.

PORT REPUBLIC, CALVERT Co., Md.,
April 8th, 1867. }

To the Editors of the Maryland Farmer :

Gentlemen—Your favor has been received; also the missing number of the *Furmer*. It affords me pleasure to comply with your request, "To describe the effects of Bibb & Co.'s Tobacco Curing Apparatus in my hands." Owing to the great press of work on the farm, in consequence of the wretched weather in March, I shall be compelled to give a very meagre account of it at present, though, perhaps, at some future time, when at leisure, I may explain more particularly its operations; also my mode of managing the tobacco crop generally.

I have had the "Furnace" in successful operation since the fall of 1861, and can say it has performed its work with entire satisfaction, increasing greatly the value of the tobacco cured by it.

I therefore recommend it to my brother planters as a safe and certain method of ensuring a fine yellow tobacco; provided the soil is adapted to the growth of such an article, the planter a man acquainted with his business, and willing to give it his personal supervision. To those who depend upon careless farm hands, not exercising their own judgment, or giving it their attention, I doubt if it would pay.

The time must come, however, when every man will see that it is to his interest to cultivate less of "The Weed," and attend more carefully to curing, stripping, assorting and packing. There must be an alteration in the quality of the Maryland crop; or, at the high price of labor, its cultivation will have to be abandoned. I should be pleased to see the general introduction of this new process of drying tobacco, but the planters of Maryland are slow to adopt a change, or take hold of anything new. The crop of Lower Maryland, the past season, was seriously damaged during the curing process by damp, foggy spells so common in autumn, by which thousands of dollars were lost. On my crop no injurious effects were produced, as it was all fired except a few thousand plants. I have no doubt but that the furnace paid me during that time from 500 to 1,000 per cent. upon the original cost. The lowest per cent. (under the most unfavorable circumstances) is 100 annually. In other words, it will pay the cost the driest fall, but in damp and unfav-

orable seasons, five or six times the original cost. The planter who has one of Bibb & Co.'s Tobacco Furnaces (and properly superintends its operations) need not fear the effect of weather during the curing process. On the contrary, while his neighbor's crop is almost rotting in the house, he is producing an article of superior quality.

I would remark here that some persons who have tried the furnace have not met with my success; but I consider this owing to bad management—not having their barns as tight as necessary, or not carrying out the directions given for the management of the furnace. I herewith enclose a circular with full directions as to tightness of barn, setting up furnace, yellowing and curing the tobacco, &c.—From my experience, I prefer to scaffold my tobacco for two or three days, during the warm month of September, before putting it in the barn to be fired—the sun seems to impart just the amount of heat necessary to yellow the article beautifully.

When put in the house (in this yellow condition) the heat should be started at 100, and gradually increased to 120 or 130 degrees. To those who object to scaffolding, preferring to put their crop directly in the barn, I would suggest that it should remain two or three days without fire, in order that the yellowing process should commence before applying artificial heat. To yellow tobacco properly by fire requires great care and judgment. Too much heat in the beginning will cure the article green.—The most certain plan therefore is not to use fire until the yellowing process has well commenced.

Wishing you that success which your noble enterprise deserves,

I remain yours, truly,
G. W. DORSEY.

This Furnace, for either wood or coal, (less pipes,) of sufficient capacity to heat a barn 24 by 40, will cost about \$110. They are manufactured by Messrs. Bibb & Co., 39 Light street, Baltimore, Maryland, to whom parties can apply for circulars of particulars, &c.

DRY HAY FOR COWS IN SUMMER.—Cows sometimes get a surfeit of grass, especially in wet, warm weather, when the grass is succulent and rich. This feed distends the bowels uncomfortably. An armful of dry hay once a day will serve to absorb some of this moisture, and benefit the cow in several respects,

FOR THE MARYLAND FARMER.

BIOGRAPHY.

Allow me to lay before your readers the following brief notices of two highly distinguished agriculturists and agricultural writers, whose labors and writings in behalf of agriculture ought to be far more widely known and imitated than they now are:

John Beale Bordley.

John Beale Bordley was born in the State of Maryland in 1728. He was a lawyer by profession, and a Judge of the Superior Court and Court of Appeals of Maryland. But he was so fond of rural pursuits that he spent most of his leisure time in superintending his handsome landed estate on Wye Island, in the Chesapeake Bay, where he did much, both by his example and his experiments, to improve the art and science of husbandry. He wrote and published many essays and short sketches of agricultural subjects, and also a valuable book on agriculture, whose title I am unable to give, never having seen it. *Fessenden*, however, in his "*Complete Farmer and Rural Economist*," published in 1834, gives us several quotations from Bordley's work, which show that it was written in a clear and beautiful style.

Dr. Daniel Lee, in noticing an old American work on agriculture, says: "In an exceedingly interesting work, entitled '*American Husbandry*,' published in London (England) in 1775 and written by an American, the following remarks may be found on page 98, vol. 1, &c." Can this be Bordley's work, or is it the production of some other American writer? Who can tell, and give us a satisfactory account of said works, if they are really distinct treatises? (See U. S. Agr. Rep. 1849, p. 25.)

Judge Bordley died at Philadelphia in 1804, aged 76 years.

Edmund Ruffin.

Edmund Ruffin, of Virginia, was a still more highly distinguished agriculturist and agricultural writer. He seems to have been an Englishman by birth, and a printer by profession, and after his emigration to America he commenced the publication of "*The Farmer's Register*," a valuable monthly agricultural journal in the city of Baltimore, I think. In 1818, or thereabouts, he commenced farming himself on what he called the "*Coggins Farm*," consisting of 600 acres or more of high, hilly and mostly sandy land on the south bank of the James River, and about twenty-four miles southeast from Richmond. And in 1844, or thereabouts, he also commenced farming what he called the "*Marlbourne Farm*," another large tract of low, flat and heavy textured soil, on the south side of the Pamunkey River, and about thirteen miles northeast from Richmond. And through a judicious system of marling, and of sowing, growing and ploughing down dense masses of the Cow Pea and its vines, as a green manure, he greatly improved these much worn-out or exhausted lands, and made them produce large and superior crops of wheat and other farm crops as compared with those of his neighbors. And to give us the results of his experiments and success in a clear and reliable form he wrote and published "*An Essay on Calcareous Manures*," an octavo pamphlet of 116 closely printed pages, and another work entitled "*New Views of the Theory and Laws of the Rotation of Crops and their Practical Application*," which contains many valuable hints, the results of his own careful practice and

experiments. He also translated into English and published, M. Purvis' French "*Essay on the Use of Lime as a Manure*," an essay of great practical value, embodied into Chaptal's Agricultural Chemistry, a small volume published in 1840 by the Messrs. Harpers & Bro., of New York city.

These biographical sketches of Messrs. Bordley and Ruffin are entirely too brief and imperfect to do their labors and works anything like justice, or ourselves the good we might derive from them.—And I have written them merely with the view and the hope that some of those to whom their characters and memories are dear may be induced to give us, through the columns of your interesting and valuable agricultural journal, full and carefully written biographical sketches of their lives, labors, writings, &c., with their exact titles and the precise years of their publications. And if they will accompany these sketches with extracts from their books and essays, giving us *their most valuable thoughts in their own words*, it will, I have no doubt, aid our Maryland and Virginia farmers very much in improving their now poor and exhausted farms. And that renovation or soil improvement will not only be a great blessing to the citizens of those two States, but it will at the same time add largely to our wealth, strength and comfort as a nation. It is well enough for us to read and study the agricultural theories of Baron Liebig, the great German chemist, but we should not ignore or forget to imitate our own American farmers and writers who have greatly improved their own lands and crops.

J. F. WOLFINGER.

MILTON, Penn., April 1, 1867.

NUT GRASS--SHEEP SORREL.

To Editors Maryland Farmer:

In the March number of your *Farmer* information is asked in relation to the destruction of *Nut Grass*. It can be killed by the following directions, and in the small space of a garden it can very easily be made to surrender:

Take one-inch plank boards, lay them side by side all over the ground, the sides to touch each other; let them lay so from the middle of March to the middle of September; then take up your boards and turn as many hogs in as will turn up the land thoroughly. Let them stay on it about two months and a half, then take them off and fallow it not less than ten inches deep, and broadcast about fifty bushels of shell lime per acre; let it lay all winter, and you will not be troubled again with Nut Grass.

I have had a very limited experience in sheep sorrel. I saw one of my neighbors about ten years ago kill it on one field, which was the thickest set that I ever saw, and exercising all the skill in man, at length found out a plan. He cultivated it in corn two years in succession; the first year the sheep sorrel almost took possession of the land and corn both, and the second year he let the ground lay until the middle of June, when it had made its appearance, and I think every seed had come up, and was about six inches high; he then put his ploughs to work and ploughed about seven inches deep, and on the 20th of June he planted his corn and harrowed the rows and let it lay five or six days, then he harrowed it crosswise, and worked the corn about once a week until the last of July, and in this way he destroyed the troublesome plant.

A YOUNG FARMER.

HAMPTON, Va., April 15th, 1867.

FOR THE MARYLAND FARMER.

GUTTERS AND SPOUTING.

Having now had nine years experience with the use of an original mode of discharging the water from the spoutings of buildings, and believing that it is preferable to any other plan in use, I have decided to communicate it for the benefit of the readers of the "*Farmer*," and I hope it will be copied by all your exchanges.

I would first say that the numerous and very injurious effects of the old system of arranging the spouting, or "leaders," as they are called in some regions, from gutters of buildings, led me to endeavor to devise a plan that would, if possible, avert these effects. I accordingly adopted this plan, viz: Of bringing the tin spouting to within some ten inches of the surface of the ground, and at this point inserting the tin tube into a glazed earthen pipe, without any elbow in the tin pipe, but placing an earthen bend below frost in the ground, and continuing the pipe in the ground, joining all the discharges from the building into one main pipe, which I discharge into a cistern, if any is required, if not, discharge the water on the surface of the ground, at a point lower than the bottom of the cellar. If this is well done, none of the water which falls on the building is absorbed by the foundation walls, or finds its way into the cellar; and another very desirable result is attained—the water will never freeze in the spouting and rupture it.

This is prevented by the pipes in the ground absorbing heat from it, which is given off to the air in the piping, which rarifies it sufficiently to cause it to rise continually when the temperature of atmosphere is down to freezing, and meeting the water, it has the effect to entirely prevent freezing in the spouting above ground.

Thus arranged, and with a proper strainer in the gutter, over the mouth of the spouting, to prevent leaves from getting in, the spouting will need no repairs for many years, nor any attention, except to remove the leaves from the gutters when they shall be found to overflow.

The best strainer that I have found to insert in the spouting in the bottom of the gutter is a globe-shaped galvanized wire cage. This is effective, while the horizontal strainer in the bottom of the gutter clogs directly. In the city, or in exposed positions, where the spouting is likely to be injured, cast-iron or heavy galvanized sheet-iron should be used to a proper height from the ground. One of the worst effects of discharging water from the gutters of buildings on the surface, is that it is liable to get under the foundations at or near its place of discharge, and by softening the ground at this point causes the building to settle unequally, which is particularly injurious to plastered dwellings.

Truly yours,

J. W. WILKINSON,

Landscape Gardener and Rural Architect.

CISTERNS.—A correspondent of the *Country Gentleman* writes to that paper on the way to have pure cisterns, as follows: This spring my cistern got quite filthy, and a great many angleworms in it, and we could scarcely use the water. I procured a couple of live fish and put them in the cistern, and since that time it has been free from worms, and dirt, and smell. The fish will live and grow finely.

FOR THE MARYLAND FARMER.

TO RAISE CUCUMBERS.

Bore gimblet holes in each stave of a barrel about midway; settle it six inches deep, and draw the earth around it up to the holes. Fill it with long manure to the same; fit a plug in each hole; six plants around the barrel, a foot from it, will be sufficient. Fill the barrel with water every evening, and supply the plants as they may require, keeping them always moist. Provide poles or fence-rails ten feet long and stick one end of them into the base of the mound, resting the other end on a crutch three feet high. These surround the barrel; on these lay your pea sticks for the vines to run upon, leaving an entrance, and you will be astonished at the result.

ANOTHER METHOD.—Having nailed the hoops to every alternate stave, remove the loose ones, and settle the barrel six inches deep and draw up the earth all round to the top. Fill up with long manure, and plant as above. Water every evening, and cover the ground with pea sticks.

To Raise Tomatoes.

Having bored a hole in the bottom of a barrel, fill it one-third deep with long manure, then add a foot in depth of good soil; on this have one plant. The growth is prodigious, and will soon hide the barrel, presenting a beautiful sight with its green leaves and ripe fruit.

FRANK H. SMITH.

SMUT IN WHEAT.—David Hill, St. Lawrence Co., N. Y., sends to *The Rural New Yorker* his method of preparing seed wheat to prevent its smutting, and gives an instructive experience. He says:—"Soaking the seed wheat in chamber-lye that has been kept several weeks and become quite offensive to smell, and afterwards coating with lime, will prove an unfailing remedy. My method of preparation is to clean a space on the barn floor and place the wheat to be sown in a pile thereon. Then pour the liquid on, being sure to wet every kernel. Then sift quick-lime over the pile and thoroughly mix with the shovel. Use quick-lime enough to dry all the dampness, and the seed is ready to sow. In 1832 I sowed a field of nine acres. I prepared the seed in the above manner, and on sowing found that I had not quite seed enough, so I went to the granary and got a little unprepared wheat and sowed one "ridge" and a half with it. Not a particle of smut appeared in any other part of the field, but this portion, (which by the way lay directly in the middle of the field,) was considerably affected with it. I have known others to have a similar experience."

"Hail Sabbath! thee I hail, the poor man's day!

The pale mechanic now has leave to breathe

The morning air, pure from the city's smoke,

As wandering slowly up the river's bank,

He meditates on Him, whose powers he marks

In each green tree that proudly spreads the bough

And in the tiny dew-bent flowers that bloom

Around the roots; and while he thus surveys.

With elevated joy each rural charm,

He hopes (yet fears presumption in the hope,)
 That Heaven may be one Sabbath without end."

We reproduce below the following report of the Committee of the Maryland Legislature on Labor and Immigration. It is written with great ability; sets forth the inducements which the State holds out to immigrants very clearly, and is in every respect deserving of attention. The question thus treated is one that is of momentous interest to all classes of our people, and we heartily trust that every possible assistance will be given individually and collectively to promote a matter of so much importance to the future welfare and prosperity of our State.

LABOR AND IMMIGRATION.

The Committee upon Labor and Immigration beg leave to submit the following report:

The Committee have given to the subject the anxious and thoughtful consideration which its paramount importance demands.

Since the sudden abrogation of our hereditary and patriarchal system of involuntary servitude, greatly unsettling and demoralizing, as might have been expected, that hitherto useful and contented class of labor, no subject has arisen of more immediate and pressing importance to the agricultural and planting interest of the State.

The black man, naturally kind, amiable and submissive, is admirably fitted for the servile condition which for two centuries he has so advantageously occupied in this country, and under which he has been lifted from a state of barbarism and heathenism to one of civilization and Christianity. Whether in his new condition of freeman, he shall be able in the great race of life to cope successfully with the more active and enterprising white man, is a problem which time alone can solve. If we compare his condition in the free States, where for generations no impediment has existed to his moral and intellectual improvement, with rare exceptions, we must conclude that a retrograde, instead of an advanced condition, is his unhappy fate. Truthfully and graphically as he was described by his liberator, President Lincoln, "a houseless, homeless and landless race," instead of bewildering and intoxicating his mind with ideas of learning and literature, and social and political equality, he had been taught that work—honest, faithful work—was the first great lesson of life; and that by work, and work alone, could he gain an honest livelihood, and lift himself from want and degradation to independence and respectability. Our jails and penitentiary would not now be filled, as they are, to repletion with colored criminals, and this Legislature engaged in the difficult task of seeking foreign labor as a substitute.

As Marylanders, so long and so intimately associated with this class of our community, we cannot but feel a deep solicitude in their future welfare. Their present condition has been forced upon them without any agency of their own. They are not responsible for it. From former services and dependence they demand our sympathy and assistance, and all impediments, if any exist, to such employments and avocations as they are fitted for, should be removed. But to admit the negro to social and political equality is contrary to long established habit—revolting to taste and judgment, and violative of the laws of God, who, in His own wise providence, has placed the two races as far

asunder as light is from darkness. The welfare of each demands that they shall move in their appropriate spheres. When forced from it, commotion, agitation and conflict will inevitably follow, and a war of races, ending only in the extermination of the weaker, will be the end of the experiment.

Labor, then, being the key to production, and absolutely necessary to the cultivation of the soil and its full development, it becomes interesting to investigate the nature of labor—what it accomplishes? what are its wants and duties? and how ought it to be dealt with?

What is Labor?

According to Webster, labor is defined to be "physical toil, bodily exertion, muscular strength, painful effort, directed to some useful end." In agricultural pursuits, it encounters fatigue, exposure to all weather—heat and cold, wet and dry, frost and snow. It has one never ending round of duty, from sun to sun, from week to week, and from month to month. There is no period of the year at which farm labor may not be usefully and profitably employed. Then, what does labor accomplish?

Labor fells the forests; drains the swamps; furrows and plows the fields; sows, reaps and harvests the crops; threshes, cleans and prepares them for market; makes roads, digs canals, builds houses, towns, villages and cities. From the sowing of the seed to the harvesting of the crop—from the humblest cottage to the palace and full-grown city, this indispensable agent, labor, is always present; always toiling; always necessary. Its *wants*, then, obviously become the next subject of inquiry.

The wants of labor, primarily, are food, clothing and shelter. But since the system of involuntary labor has been abolished, and we now buy labor like any other commodity in the market, its demands must not be neglected. In this age of scarcity and competition, not only the physical, but also the moral and intellectual wants of labor must be supplied. The wages of labor like every other commodity are regulated by the laws of supply and demand. In this country it is not likely to sink so low as merely to supply the natural wants of man—such only as food, clothing and shelter. It has higher aspirations, and the good of society and the welfare of the State demand that these aspirations should be encouraged and provided for. Hence, schools and churches become a necessity if we would attract and permanently domicile a desirable class of voluntary farm labor. In addition to this, the innocent pastimes and amusements of foreign nationalities should also be provided. Labor must have its relaxations and diversions, or like the bow which is always strung, it soon loses its life and elasticity. If diversions, of an innocent character, are not provided, those of vice and immorality will be sought and indulged in.

The physical nature of labor being understood and appreciated, its great achievements acknowledged and its wants—physical, moral and intellectual—provided for, it follows as a moral, legal and religious obligation on its part that labor should return a faithful, willing and active service to its employer. Not only should an honest day's work be performed for an honest day's wages, but the interest of the employer should be the interest of the employed. This on the farm can be shown in a variety of ways, namely: By the care of tools and implements, attention to stock, to fencing, and

a general oversight and readiness to assist in unforeseen accidents, or to put in place and order whatever may accidentally be out of order. This interest and attention on the part of labor never fails to meet an acknowledgement and due appreciation:

On the other hand, it is the duty of the employer to meet with punctuality and exactness his promises and engagements to his hired labor. "The laborer is worthy of his hire," is an injunction of holy writ, and a curse is pronounced upon him who "keepeth back the wages of the hireling." Therefore the highest moral obligation as well as self interest, common honesty and justice require a scrupulous exactness in the discharge of this part of the contract.

The wants of labor require that the payment of wages should be divided and made at frequently recurring periods, either weekly or monthly, as the case may be. For the employer it is generally easier and better to pay his hired labor in monthly instalments, than in one annual payment; and it enables the laborer to buy for cash, and to keep out of the clutches of merciless vendors of the necessities of life, for which he would have to go in debt, did he only receive his wages at the end of the year's services.

Thus far your Committee has only considered manual labor, because it is fundamental and necessary to give direction to all other kinds of labor. Animal labor has been used, and is destined by the skill and inventive genius of our people, still more to be used, to modify and economise farm labor. The elements of wind and water can also, in many situations, be turned to good account; and steam is being economically applied to too many uses, to doubt that at no distant day, it will be made tributary to the toil and labor of the husbandman.

Your Committee having noticed the destruction of involuntary labor by sudden emancipation, its consequent demoralization and unreliability, and as pertinent and necessary to a due and proper consideration of the subject of organizing a system of voluntary to replace the involuntary system bequeathed to us by our forefathers; having considered the nature of labor, its importance, its wants and duties, and also the duty and interest of employers in dealing with employees, it now becomes necessary to inquire from whence a supply of labor can be obtained.

If we for a moment consider the vastness of our common country—the number of States and great variety of employments seeking and competing for labor—your Committee must confess that this is a difficult and embarrassing question. And yet, if we remember the character, energy and enterprise of our people, the peculiarly advantageous position of our State—near the sea-board—with our great commercial emporium at the head of one of the noblest bays on the globe, and our close proximity to the Capitol of this great nation, we at once see that we have the strongest and most encouraging motives for effort, and a strong probability of success within our reach.

Probably the most fortunate circumstance for Maryland, at this time, is the establishment of lines of steamers directly from Baltimore to and from Liverpool, England, and Bremen in Holland. These steamers are calculated and expected to bring into the port of Baltimore annually from 10 to 15,000 foreign emigrants. A large per-centage of these emigrants are farm laborers. They have heard of our free government—where freedom of religion,

freedom of occupation, and the pursuits and objects of life are before them and open to all. They have also heard of our vast domain and boundless Western prairies—where farms are cheap, and labor scarce and high—and the attractive West is presented to them before leaving their fatherland by agents from Western States, and large railroad corporations, as the land of promise, and the goal of all their hopes and expectations, so that when landed here no persuasion or inducement can divert them from their original destination, and they hurry off by our railroads for the great West, as fast as steam and rail can carry them. To detain them here and induce them to settle in Maryland we must pursue the same course which has been so successful in attracting them to the West. The Legislature of 1866 has wisely created the office of Commissioner of Immigration, and imposed upon that officer onerous and important duties. The duties are doubtless well performed, but the appropriation and compensation appears to be altogether inadequate to the adoption of a full and comprehensive plan for the reception and accommodation of so large a body of immigrants as is expected to arrive annually in the port of Baltimore; and no provision whatever is made for sending an agent to Europe, which the Committee believe to be absolutely necessary to the successful working of the Commission at home. First impressions and predilections are strong and difficult to eradicate—and if the agent is successful in creating an impression upon immigrants before embarking, favorable to Maryland, the first settlers will, by correspondence and otherwise, draw after them a stream of immigration to fill up our sparse rural population—and sufficient to occupy and improve every county and neighborhood in the State. The Committee would therefore strongly recommend the appointment of an agent in Europe under the direction of and to co-operate with the Commission at home.

There is one other point, although not directly connected with the question of labor and immigration, yet so important in its effect upon that subject, and the general wealth and prosperity of the State, that your Committee beg leave to present a few observations upon it. Your Committee allude to the subjects of roads, turnpikes, canals, railroads, &c. These afford the means of transporting the productions of labor to market, and add to, or diminish the cost of labor, according to the cheapness or dearth it costs to bring it from the place of production to the place of sale. Whatever cheapens the cost of transportation, cheapens the cost of production, and consequently adds to the value of labor; hence the great importance of opening, constructing and making as perfect and useful as possible the roads and highways of the State. These of every description which capital can be found to build, it is obviously the *interest and duty* of the State to foster and encourage by all necessary legislation. It is difficult to find an individual or community that a good road or highway has ever injured. On the contrary, their benefits and advantages can only be counted by millions. Not only millions of dollars have been gained by the introductions of roads, turnpikes, railways, &c., but what is more valuable, the great saving of time they gain for the community. Who can estimate the days, weeks and months gained in the aggregate by the hundreds and thousands of people that are constantly passing over our railroads? Take, for example, the Washington Branch Railroad, and compare it with the slow stage coach of former days—then it took ten hours to transport

ten passengers per coach between the two cities; now forty passengers per single car of a train of six or eight are carried in two hours over the same distance, equal to a loss of time consumed by stage travel per 10 persons of 100 hours—against 40 by railroad of 80 hours—or in other words, a gain of eight hours per day for each passenger who passes over the road—or in the aggregate, of the enormous gain of 2,560,000 hours per annum by the use of steam over horse power on one short road of only forty miles in length—which is equivalent at 10 hours per working day, to 25,600 days labor.

Your Committee have, in accordance with the views presented herein, reported a bill looking to the sending abroad a commissioner whose efforts shall be directed towards influencing immigration to Baltimore by steamers and sailing vessels. This bill also endeavors to provide a means to detain and keep permanently within the limits of the State the flow of immigration which the establishment of the lines of steamers heretofore spoken of in this report will do so much to attract, but which the cupidity and interest of the great railroad company establishing those lines of steamers prompts to transport out of the State over their long line of railroad, and whose "runners" scarcely allow the immigrant to set foot on our soil for one moment, or exercise any volition in selecting his future residence, but hurry him off to the depot to be moved with railway velocity outside of our own State to the great West, whose prosperity and population he has done so much to increase. If the bill reported does not prevent this, other legislation must be inaugurated to stop it.

Your Committee has but one other suggestion to make.

Immigration will not go where facilities for ready access to market are denied. Fortunately, our State is being checkered all over its beautiful surface with railroads, either projected or in project of construction. Let the "Maryland system," of which we hear so much, be turned to the improvement of our whole State, rather than to the aggrandizement of an already overgrown and overweening corporation. Let us encourage the construction of all works of internal improvement in the interest of Maryland, rather than confine our legislation to the benefit of one road for which the State has already done so much.

Let this be the "Maryland system" in future, and blessed as we are with soil, climate, water facilities, mineral wealth, water power, geographical location, public schools and places of worship, and a resident population, a nobler than which does not exist in any land, and our future prosperity and pre-eminence will be as great as the most ardent lover of our State could wish.

ODEN BOWIE,

Chm'n Committee on Labor and Immigration.

"BRESS DE LORD I'SE FREE."—The Brenham (Texas) *Banner* gives one of the various novel modes the negroes there take of asserting their freedom, in the case of a cook who persists in making up bread with dirty hands, flatly refusing to wash them.—When remonstrated with, her rejoinder is: "White folks used to make me wash my hands, but bress de Lord I'se free now—I is."

He who has ceased to enjoy the superiority of his friend has ceased to love him.

Van Olinda Surprise Oat.

Most of our readers will remember a brief mention of this new oat in the Nov. issue of the Farmer. At that time we spoke of having met Mr. Van Olinda, the proprietor, at Mattoon, during the Implement Trial, and examined specimens of his wonderful oats, which were really quite a curiosity from their great size and beauty. Recently we have read an article in the *Chicago Republican*, from which we make a brief extract:

"The producing classes are interested in knowing more about these oats. The writer has a wholesome distrust of new seeds, wonderful roots, and remarkable fruits. He looks a man steadily in the eye a long while before he receives his statements of the wonderful character and newness of anything. And even then, like Thomas, he doubts. Accordingly, to satisfy himself concerning the statements made of these oats, he has to-day visited Sandwich, talked with Mr. Van Olinda's neighbors, looked upon and walked over the fields where the oats grew, examined the straw, explored the granary where the oats are stored, seen and felt of them as they came from the thrasher, handled them as they came from the fanning mill, thrust his hands into the bins from whence the public are supplied. And we are entirely satisfied that, if we can believe our senses, there is no sort of humbug about them. They are of wonderful size, weight and beauty—will weigh nearly or quite as much per bushel as barley. We heard a brewer say, in Chicago, that they would malt excellently. The best of oat meal may be manufactured from them.

It is claimed that these oats will yield 125 bushels per acre. Mr. A. Adams, a responsible and reliable citizen of Sandwich, measured the ground on which were grown 375 bushels of these oats the past season, and asserts that it contained only two acres and 128 rods. We visited this ground to-day. It lies with south-western exposure, convenient to the barns, and receiving, a part of it, some of their wash.

One word about Mr. Van Olinda. He is a hard working farmer, who started here on the prairie without capital, and by his industry has secured to himself a comfortable homestead. So far as we can learn, he is not of the speculating stripe. By his careful habits of observation and experiment he discovered and developed these oats from seed much resembling wild oats, growing on strong stalks, to their present perfection."

The above is pretty strong, still the writer seems to know what he is talking about; and really, we can see no reason why as much improvement should not be made in oats as anything else.—*North Western Farmer.*

A HINT IN BREEDING.—Mr. Torr, the well known breeder of short-horn cattle and Leicester sheep, says:

"The way to establish uniformity or family likeness is to begin by putting the best male to the best female, and to continue to put the best to the best; secondly, not to put opposite characters together, or the traits of both will be lost; but if any fresh characteristic is required to be imparted to the issue of present stock animals, this must be done by degrees, or by that discreet selection which will yield a little more wool, or size and substance, the first year, and a little more in the second and third generations, and so on."

PLOWING AND PREPARING GROUND FOR DIFFERENT CROPS.

L. L. FRENCH, RICHFIELD SPRINGS.

In plowing and preparing ground for different crops, I take it for granted that the ground is under-drained, or sufficiently dry without it.

We will begin with corn. Sometimes I plow in fall, and at other times in spring. I plow so as to leave as few dead furrows as possible, for the reason that you can't raise corn in dead furrows. I always put corn on greensward. I either go round the piece, or turn in by back-furrow, so that my land lies smooth and level. I then, some time before planting, put on my harrow, and harrow the same way it was plowed the first time going over the ground, then take it slanting across the furrows, then perhaps the other way, slanting as before; that has a tendency to mellow the ground very nice.—I wish here to be understood that I always harrow that way on greensward for any crop. On stubble or mellow land, it does not require it. Now for marking for planting: I should have said that if there were any stones in the way of the harrow, draw them off before you finish harrowing. If I intend to furrow, I think it pays to take my marker and mark my ground the way I want my furrows first, then I am sure of having my furrows the right distance and straight; and here I would say that I want my corn rows straight, and also my lands when plowing. I was about to say that when I had my land furrowed, I mark the other way; I think it pays, even if you don't want to cultivate but one way, for the reason that your hills are all the same distance, which I consider very important, whether corn, potatoes, or any crop that you have in hills.

I will now take the pea, as I consider them next to corn in value for feeding. I have, as a general thing, put this crop on greensward, for the reason that they do well, and oats and barley will not with us here. I prepare my ground the same as for corn, as far as plowing. I generally sow before putting my harrow on; for peas, then harrow as above.

We will now assume that we have prepared our ground for corn and peas; and as I said, I avoid dead furrows on greensward as much as possible.—We will say that we went round the piece for corn and peas; now, we are in the habit of seeding the second year, for the reason that our land will then be mellow, in good order, and also for the reason that we want our land in grass as much as possible.

I will now plow and prepare this ground for sowing to oats or barley, and seeding. You will notice that I have a dead furrow in the middle of my ground. I wish to leave it as smooth and level as I can for mowing with machine when seeded to grass. Now I go to the middle of ground, and begin plow-

ing where I left off, by turning my furrows in instead of out. This I call the gee-about system. I go a few times around, and then establish my corners, and then go ahead. You will perceive that I am working towards outside of the ground. My ground is all mellow; my team, even, does not tread on the newly plowed land. I finally come to the fence, if there is any, on all sides, and my ground is plowed. Now, I have my land all mellow, ready for the harrow—none on headlands and other places trodden hard with my team, but all is mellow. I now put on my harrow, go over ground once, and then sow, and then harrow again, and then take my roller and go over the ground with that; and here I would say that if you never tried rolling in this way, you would be surprised to see how much good it will do. I then harrow again. Now, my harrow draws smooth, and leaves the ground in very nice order to receive the grass seed. I then sow my grass seed, and then roll again. In my section, here we have more or less small stones, and rolling mashes them in the ground, out of the way of the machine, and I consider them a benefit to the crop; where they are of much size, I pick them off; and here I would say that I never could harrow on ground where stones were all the time catching in my harrow, and making furrows in my ground, certainly, where I am seeding to grass for meadow.

I said I preferred putting corn or peas on greensward. I will say that I also put potatoes on the above. Now, if I have more ground to break up than I want to plant and sow to peas, I put on buckwheat, and that leaves ground very mellow and nice for seeding the next year. The reason I have for not putting oats or barley on sward land, is because that it will rust the straw and be light grain.

Now, what I wish to *impress* on the minds of farmers is this, that when you put your team on a field to plow, see how that land was plowed last.—Don't go round the field year after year and turn the soil toward the fence till you get the best of the soil piled two or three feet, as a great many farmers will do (and some of them you would call good farmers, too); but see to it that you don't have a ridge around your lots. Avoid, as much as possible, having dead furrows when you seed to grass, unless your land is wet, and you will recollect that I supposed the land to be naturally dry, or made so by under-drains. Now, if your land is somewhat wet or springy, I would recommend plowing in narrow lands, and leaving dead furrows open when seeding down to grass.

If your committee were at my place, I could show them two fields plowed last fall for seeding in spring, where my team did not tread on the ground at all after it was plowed, and there is not a dead furrow on the lots.

I don't know that there is a farmer in Herkimer county that plows as I do. A few years ago I had a neighbor to help me; one day we were near where I had a lot plowed, by turning the land in toward the center, and I asked him if he could tell me how that land was plowed. He looked at it, and looked at it, and finally he said he could not.

Now, gentlemen, one thing I *do know* by experience, that my *principle* in plowing is a good one, and if any one wishes to ask me any questions with regard to above, I shall be very happy to answer them at annual meeting.—*Transactions of the New York State Agricultural Society.*

EXPERIENCE OF A PRACTICAL FARMER.

I send you an extract from a letter received by me from David Dickson, of Hancock county. The stress of the late war drove me into his neighborhood, and gave me an opportunity of learning much of the system and success of this enterprising planter.—Fifteen years before the war, he commenced planting on what was considered light sandy lands, much exhausted, with a capital of \$25,000. When the war broke out, his capital was eighteen times larger. This result was brought about by his energy and system; by improved modes of culture; by improvements in agricultural implements; by attention to the health and comfort of his laborers; by nursing and protecting his stock; and care bestowed upon his bees, his orchards and dairy. Above all, and mainly, his golden harvest was reaped from the judicious use of Fertilizers. Believing the views he advances will be interesting to your agricultural readers, the extract from his letter is submitted, with the hope that his example may be imitated by our planters. Respectfully, JAMES A. NISBET.

EXTRACT.

During the last year, I learnt some valuable new lessons. One was the training of hands to do double the amount of work, with more ease and less waste of sweat and muscle. My former hands being better trained than others, had better offers than I could give, and nine-tenths of them left me. I then employed hands from as many as forty plantations, and got none that knew how to work to any advantage. I had hands before the war that could pick 600 pounds of cotton in a day, all by day-light, and all hands that went to the field averaged 300 pounds per day, without a lick or any white man in the field. All of my trained hands have now applied to come back, preferring one-third of the crop gathered on my place, to one-half on the places worked last year. Whilst I owned them they told me to plant 33 acres in corn and cotton, and 17 acres in wheat and oats, and they would cultivate

it with my aid, in preference to 20 acres under an overseer, and could do it with more ease. My crops before the war averaged me \$1,000 per hand. I divided thus: \$200 for manure; \$200 for horse-power, tools, &c.; \$300 for land and \$300 for labor. My estimation is now, when hands work well, to divide as follows:

First, take pay for all purchased manure—the balance to go one-third for land-rent—one-third for horse-power and tools, including gin, wagons, carts, wheat-thresher, &c.; hoes and axes excepted, which each hand should furnish—and one-third to the laborer, being divided among the hands that produce; the cotton seed to be returned to the land, and all crops left in the field ungathered, to go to the owner of the land.

Now as to commercial manures, &c. I am written frequently to know of whom I purchase, and what kind I use. John Merryman & Co., of Baltimore are my agents, but there are other parties who will do justice. Money is so plentiful at the North, that speculators purchase each cargo of Guano as soon as it arrives, and hold it for an advance, so that the planters and farmers must act upon some uniform plan. The only plan I see now, that will do any good, is this: Send your check on to Baltimore, with instructions to purchase any manipulated or mixed manures. Many of them, no doubt, have merits, but the planter had better do his own mixing. Then he will know what he has got, and save the profit. The best manures bring the crop of bolls on cotton early, and a drouth then, with half a crop, would check the growth; whilst the cotton with an inferior manure, and but few bolls, would be injured; the rains setting in would injure the first far more than the last. (?) The manures I am now using are composed thus: Peruvian Guano, Bones, Salt and Plaster—one hundred pounds of the last. Bones are but of limited supply; resort must be had to some of the phosphatic Guanos, of which Columbia paid best, but is now exhausted. The true plan, is to try all manures on their own merits—then do your own selecting and compounding. There are some of the phosphatic Guanos that I have not tried, but my opinion is, that they are too high to pay a profit. Manure should yield at least double the cost, to pay for capital, labor, taxes and all risks of worms, drouth, flood, &c.

Very truly yours, DAVID DICKSON.

Macon Telegraph.

VALUE OF A DEAD HORSE.—A French chemist has shown by analysis that thirty pounds of flesh, thirty-two pounds of blood, sixty-two pounds of bone, contain as much nitrogen, as one thousand pounds of farm manure; and hence, that the carcass of a dead horse is worth more than a ton of the best farm-yard manure for purposes of vegetation.

EXPERIMENTS IN MANURING.

In view of the fact that France obtains fifty per cent. more wheat per acre than the United States, and England more than a hundred per cent. greater crops, it is time that facts concerning fertilizers and improved modes of culture should be more carefully noted and better heeded.

Mr. J. B. Lawes, who has been making wheat experiments in England for twenty-three successive years upon the same land, reports the result in the year just closed, with comparisons with three preceding years, and the average for fourteen years, as follows:

BUSHELS OF WHEAT PER ACRE.

How manured each year.	Harvests.				Average for 14 yrs, 1853 to '65.
	1863	1864	1865	1866	
Unmanured.....	17½	16	13½	12½	15½
Farm-yard manure.....	44	40	37½	32½	35½
Artificial manure.....	53½	45½	40½	39½	37½
Artificial manure.....	55½	49½	43½	32½	39½
Artificial manure.....	55½	51½	44	32½	35½

WEIGHT PER BUSHEL OF WHEAT.

Unmanured.....	63.7	62.0	60.1	61.3	57.3
Farm-yard manure.....	63.1	62.5	61.6	61.7	59.8
Artificial manure.....	63.6	63.1	61.0	61.0	59.0
Artificial manure.....	62.3	63.5	61.1	60.1	58.5
Artificial manure.....	62.1	62.6	61.5	60.6	57.8

Mr. Lawes says: "From the progressive decline in the produce from year to year since 1863, it will, perhaps, be supposed that the result is in great measure connected with a gradually declining condition of the land, and therefore not mainly the effect and the indication of variation in the productive character of the seasons. That the results are not due to the changing condition of the land, but to the changing character of the seasons is, however, evident from the fact that several times during the last fourteen years the crops on these same plots have been as bad as, or worse than, in the present season."

The following statement shows the result in the most unfavorable seasons, the worst being in 1853:

	1852	1853	1860	1866
Unmanured.....	13½	5½	12½	13½
Farm-yard manure.....	27½	19½	32½	33½
Artificial manure.....	26½	23½	27½	29½
Artificial manure.....	27½	23½	31½	34½

"The variation in amount of produce from year to year may, therefore, safely be taken as almost wholly referable to season. The quality of the grain, as shown by the weight per bushel, is seen to be considerably above the average of the last fourteen years.

"Turning from these experimental results to those obtained on my farm under ordinary management, I may mention that three separate fields gave this year 40, 42 and 46 bushels per acre, respectively, against 38, 48, 48 and 51 bushels obtained in the four last years, thus indicating a considerable decline in amount of produce. On the other hand, the weight per bushel is somewhat higher in each of the three cases this year than in either of the four last years.

"Upon the whole, I conclude that the wheat crop of 1866 will prove to be decidedly below an average, and, judging from the produce of both my experimental and ordinary crops, and the relation which has been observed between them and the crops of the country generally for many years past, I should estimate the deficiency at not less than 10 or 12 per cent."—*Monthly Report Ag. Department.*

ALSIKE CLOVER--*Trifolium Hybridum.*

This new species of clover originated in the Parish of Alsike, in Upland, Sweden, where it grows in great abundance. It has pale red flowers, with oval, obtuse leaves, smaller and of a lighter green than those of red clover; and, so far as tested in this country, would appear to be valuable for permanent pastures and mowing grounds. It does not reach its full luxuriance till the second or third year, and seems to thrive on moist, and even wet lands, which red clover does not. In foreign journals we see it spoken of as doing better for mixing with other grasses than growing alone. It would be well to sow some of it with red clover, so that when that is running out at the end of two years, the Alsike is established, and can take its place.—Its habit of growth is more like the white clover than the red.

In the Experimental Grounds at Washington, we saw a plot of Alsike clover growing, which, the Superintendent informed us, was mown three times in the season of 1866 yielding over four tons to the acre, and there was nearly enough growth for a fourth cutting. It would appear from this as if our climate was much more favorable for it than in Sweden, where it is spoken of in the hand book of Swedish agriculture "as one that no second crop can be expected from."

In some of the seed imported to this country from Europe, there has evidently been a mixture of white clover, and sometimes much imperfect seed. This sufficiently accounts for a failure with it in some cases.

The color of pure Alsike clover seed is greenish, and verging toward violet.—*Practical Farmer.*

Misery loves company, and so does a marriageable young lady. We wonder!

HOME MADE GUANO.

Owing to the worn-out condition of our lands, fertilizers are becoming indispensable assistants to profitable farming. But as Guano, the principal natural fertilizer, is subject to heavy expense in transportation from the remote regions where it is found, scientific farmers, have turned their attention to artificial manures, which are now much used as substitutes for Peruvian Guano. In Baltimore and several Northern cities, as well as in Augusta, Georgia, the business of manufacturing fertilizers is carried on to a considerable extent. Some of the manufacturers use the Peruvian, as an ingredient in the artificial guano, while others reject it, using in its stead, decayed fish, bones, lime, &c., all of which substances have their advocates among the knowing ones.

But there is one objection to all these fertilizers, which frequently prevent farmers from using them, especially if they live at a distance from railroads. This is the expense, time and trouble of getting the fertilizer to the field in which it is needed. The inconvenience of hauling guano ten, fifteen or twenty miles, especially at a time when plows must be stopped to do it, confines its use to a small belt of land on each side of our railroads. There is however, a plan by which this difficulty may be obviated. This is the manufacturing of guano by the farmer himself. The most bulky ingredients are to be found on every farm, and the other can be had in all drug stores.

Mr. B. R. Duval, a druggist of Richmond, publishes in the *Farmer*, the following receipt for making an artificial guano, which he says was tested before the war, by a number of farmers in Virginia, many of whom thought it equal to natural guano. He proposes to furnish all the ingredients, exclusive of Peat, Ashes and Salt, for \$25 currency, per ton. We presume the same article can be bought in Charleston. Some of our farmers would, perhaps, like to try the experiment here. It might be tried on a small scale—say a quarter of a ton, at an expense of ten dollars, which is not a large amount to risk on an experiment that promises so large a result.

No. 1. Dry Peat,*	.....	20 bushels.
" 2. Wood Ashes,	.....	3 "
" 3. Fine Bone Dust,	.....	3 "
" 4. Calcined Plaster,	.....	3 "
" 5. Nitrate of Soda,	.....	40 pounds.
" 6. Sal. Ammoniac,	.....	11 "
" 7. Carb. Ammonia,	.....	20 "
" 8. Sulph. Soda,	.....	10 "
" 9. Sulph. Magnesia,	.....	10 "
" 10. Common Salt,	.....	10 "

*If Peat cannot be obtained, use garden mould or clean virgin soil instead.

DIRECTIONS FOR MIXING.

Mix Nos. 1, 2, 3, together; mix 5, 6, 7, 8, 9, 10, in four or five pails of water, or enough to dissolve

the ingredients. When dissolved add the liquid to the mixture, (1, 2, 3,) and mix as in making mortar. When thoroughly mixed, add No. 4, (the calcined plaster,) which will absorb the liquid and bring the whole amount to a dry state. Mix under cover, in a dry place—pack so as to exclude air—observe the proportions in making small or large quantities. The above receipt will make one ton, which will manure seven and a half acres of land.—*Yorkville Enquirer, S. C.*

MY CROPS.—David Dickson, Esq., of Sparta, Ga., communicates the following to the *Southern Cultivator*:

One of your correspondents wishes to know how much corn and cotton per acre can be made by manuring and cultivating as I recommend. I will state what my crops averaged, thus managed, under the old system:

On 800 to 1,000 acres of thin pine land, 18 bushels of corn was the lowest average. The highest average I ever made was 26 bushels and one peck per acre. The lowest acre produced 12 bushels—the highest 38 bushels, on upland, with 2,000 stalks per acre. It was easy to find ears of corn that weighed 20 ounces.

My last crop of cotton under the old system, was grown on 950 acres. I made 810 bales. The greatest amount I ever made per acre was on four acres of upland. I used 400 pounds of guano, with the usual quantity of salt and plaster for turnips, and fed them off on the lot. The following spring I added 100 pounds guano, 100 pounds dissolved bones, 100 pounds salt and 50 pounds plaster per acre, and put in cotton. The crop was 4,200 pounds seed cotton per acre.

CORN AND FODDER.—Let me say a few words on pulling fodder. Make the corn for the sake of the corn, and if the work is properly done, with deep preparation, liberal manuring, and the ground is kept clean, by shaving the grass off with the sweep, the corn will be made and hard, while the fodder is still good and green. Then the fodder may be pulled off without hurting the corn in the least. Fodder may be kept green on the stalk, two or three weeks after the corn is hard, by using salt and plaster around the hill as a manure. There is no better food for stock than fodder well saved. D. D.

WHITEWASH FOR FRUIT TREES.—A correspondent in the *Prairie Farmer* says: In my experience it has been a valuable application, both in spring and autumn, destroying a large proportion of bark lice, eggs of insects, &c. Must be used with caution, least its strength kill the tree. I took whitewash of the proper consistency for a wall and reduced it one half.

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"The Rural New Yorker" on a Tour Through the South.

We had the pleasure recently, of grasping the warm hand, and looking into the genial face of our old friend—the Napoleon of the Press—D. D. T. MOORE, Esq., editor of the "*Rural New Yorker*, Rochester, who is now on an extended tour through our Southern country. His visit is one of recreation and observation, and we commend him to our friends everywhere, as a gentleman worthy their confidence and friendship. His stay in Baltimore was prolonged at the solicitation of many old friends, that he might view our monuments, pretty women, &c. We wish him a pleasant trip and safe return to his home.

ILLINOIS STATE AGR. FAIR FOR 1867.—We have received the Premium List and Regulations for the 15th Annual Exhibition of this Association, to be held in Quincy, from the 30th Sept. to 5th Oct., 1867. The premiums announced are of the most liberal character. Officers for 1867-'8:—A. B. McConnell, President—H. D. Emery, vice-president at large—John W. Bunn, Treasurer—John P. Reynolds, of Springfield, Secretary.

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The RURAL is the best Weekly Journal of its class in the world—has the largest circulation—is ably edited—best illustrated—has a complete corps of contributors, and adapted to all classes of Rural Readers, the truth of which is verified by its extended circulation, now reaching 75,000. The reduced rates for the two puts it in the power of all our people, whose pecuniary need has prevented them from indulging in so great a necessity, to now possess themselves of the *Best Weekly*, Agricultural, Literary and Family paper in the country—and an agricultural *Monthly* that ranks high among the Standard Magazines of the day. This liberal reduction is made, at this time, to meet the wants of a large class who believe a few dollars invested in good papers is a profitable investment both for the farmer and the household.

Subscription to the RURAL alone \$3 per year—to the FARMER, \$1.50—both for \$3.50.

NEW YORK STATE AGRICULTURAL SOCIETY.—The State Agricultural Society met in the Assembly Chamber, Albany, February 13. President J. Stanton Gould in the chair. The report of the Treasurer shows a balance in the Treasury of \$9,252.39.—The report of B. P. Johnson, Secretary, was read adopted. A committee of three from each judicial district was appointed to nominate officers for the ensuing year, and they were unanimously elected: President, General Marsena R. Patrick, of Ontario. Vice-Presidents, Thomas H. Faile, of New York; Samuel Thorne, of Dutchess; Adin Thayer, of Rensselaer; Milo Ingoldsby, of Washington; Saml. Campbell, of Oneida; Joseph McGraw, Jr., of Tompkins; H. F. Foster, of Seneca; James H. Plumb, of Erie. Corresponding Secretary, B. P. Johnson, of Albany. Recording Secretary, Erastus Corning, Jr., of Albany. Treasurer, Luther H. Tucker, of Albany. Executive Committee, Geo. H. Brown, of Dutchess; John Havens, of New York; S. T. Tabor, of Queens; T. L. Harrison, of St. Lawrence; William Ely, of Broome; James Geddes, of Onondaga; W. Chamberlain, of Dutchess; J. C. Mathews, of Erie.

MARYLAND AGRICULTURAL COLLEGE.

We call particular attention to this Institution, and ask for it the patronage of every friend, not only of agricultural, but of classical and scientific education; for it combines not only instruction in the arts and sciences specially applicable to agriculture, but also embraces in its course classical and mathematical studies, taught as thoroughly as in other colleges. It suffered in common with all, or most Institutions of Learning in the Border States during the late civil war. Has of late, however, been reorganized under the direction of a zealous and intelligent Board of Trustees, composed of gentlemen, not only of the highest official position in our State, but many of them distinguished as gentlemen of liberal education, and as successful and practical agriculturists. They have profited by the experience of the past, and will spare no exertion to make this Institution justify all the promises and hopes of those who labored for its establishment.

A corps of professors have been appointed of eminent attainments and experience in instructing in their various departments; a farm and garden are under cultivation to exhibit the best modes of culture, and to teach the various useful details of agriculture and horticulture. By practical exercises, in connection with the principles taught in the lecture room, the student acquires the habit of applying scientific principles to practice.

We are sure that nothing is wanting but a correct knowledge of the merits of the Institution to secure for it an extensive patronage from all classes in this and neighboring States. All that any of the first colleges can, or do teach, in the classics (both ancient and modern,) in pure and mixed mathematics, in English literature, in agricultural science, etc., can be, and is, taught in this Institution. No special study interfering with any other, but each and every one materially aiding and assisting in the mutual development and acquisition of all. Military tactics, as taught at West Point, embraces also a part of the instruction of this Institution; and such a partial course, as may be selected by the student, is given to those who may not find the full college curriculum convenient.

The location of the College is all that can be desired; it combines quiet, with ready and easy access to Washington and Baltimore, being but a short distance from the Washington Branch of the Baltimore and Ohio Railroad, within less than half hour's ride from Washington, and but little more than an hour's from Baltimore.

Healthy location, pure air, excellent water, abundant and nutritious diet, together with varied exercise and employment in the open air, fulfill all the requirements for vigorous health and thorough

physical development. We cordially invite those who desire to aid the future progress and development of our good old State of Maryland, to give the Agricultural College a liberal support. We are fully satisfied that nothing superior in its adaptation to the peculiar wants of Maryland youth can be found outside or within our borders. Its terms are moderate, and it has the ability in every department to confer the inestimable benefits of a thorough education. We say to the people of Maryland emphatically, sustain the Maryland Agricultural College, and receive in return successors to your names and homes thoroughly educated in all the branches of a polite, classical, mathematical, scientific and practical business education, and we need not fear for the glorious future of our State.

THE COMING WHEAT CROP.—The accounts from almost every section of Maryland, Virginia, and North Carolina, speak of the prospect of a large crop of wheat. A Louisville paper says not only in Ohio and Kentucky, but in Tennessee also, the wheat crop is more extensive than is usually seen, and promises an abundant yield. The Watertown (Wis.) *Democrat*, April 11, says: "The winter wheat in this region has a fresh and vigorous appearance." The *Illinois State Journal* learns that the wheat in Sangamon and adjoining counties looks finely, better than during the corresponding season for several years past. Wheat and other cereal crops in Texas, of which an unusually large breadth has been planted, are looking splendidly, and the Lone Star planters anticipate the biggest harvest they ever had.

SEEDS FOR THE SOUTH.—Mr. Newton, the Commissioner of Agriculture, is daily sending to the South seeds and cereals, in accordance with the provisions of the recent law transferring \$50,000 from the funds of the freedmen's bureau to aid in relieving the general destitution of garden and farm seeds in the South, to give to that region new and improved varieties, and thus help to avert a famine in the immediate future. The Agricultural Commissioner has appointed Hon. Theo. C. Peters, of Maryland, lately President of the New York Agricultural Society, Agent for the distribution of seeds in the South, to perfect Southern Agricultural correspondence, and to co-operate in the reorganization and improvement of Southern agriculture.

THE SOUTHERN FARMER.—We have received the second number of this new candidate for public favor. It is edited by M. W. Phillips, Esq., well known to agriculturists all over the country as an able writer. We wish it that success it so fairly deserves. Published at Memphis, Tenn., at \$2 per annum.

STAFFORD CULTIVATOR.

Having had numerous enquiries from time to time in relation to the efficiency of this cultivator, we are induced to publish the following letter from a gentleman who has used it to his entire satisfaction.—It is addressed to Messrs. Norris & Pusey, of Baltimore, Md.

AFTON, NEAR HAGUE, VA., Feb. 4, 1867.

Messrs. Norris & Pusey:

Gentlemen—In May last I took one of your Stafford Cultivators on trial. The experiment I made was quite limited, having used it in the cultivation of about fifteen acres, but sufficient, I think, to test its value and utility, and, in August following, bought it. The land whereon I used it was fallowed with a large plow, but not harrowed, and therefore rough. I crossed it at a distance of $3\frac{1}{2}$ feet, sufficient in any land, and enough to ensure the cultivation of all the surface between the rows.—The proper way of using the Cultivator is, I think, to fallow and harrow before crossing and planting, and then for the first working to run a suitable harrow over the corn once in each row. After that the cultivation may be completed with this implement by two workings—once each way. But I first reversed the shovels, throwing the dirt from the corn. As the land was rough, this operation required a good deal of care and attention. Then restoring the shovels, I crossed the land, throwing the dirt to the corn, and followed at a suitable interval of time with a lengthwise operation, which completed the whole cultivation, except a few patches heavily set in wire grass, where I used the hoe a little in the last working.

The shovels are so constructed as to throw sufficient dirt to the corn—nearly as much, I think, as the gang plow. With a pair of horses or good mules, eight acres of land may be cultivated each day with ease, and, as it is not necessary to go over a field oftener than at intervals of 12 or 13 days, it follows that one hand may cultivate a field of one hundred acres. Of course the field should be clear of stumps and other obstructions. But the structure of the machine is simple and durable, and no breakage is likely to ensue except such as may be repaired in a country blacksmith shop, or with an extra shovel. It will save time and much additional care to plant the corn with as much accuracy as possible, but if the hills be not too much out of line a treadle attached to the pole, worked by the feet without trouble, will so far control the course of the shovel as to prevent cutting up the corn. The axle is about three feet from the ground—high enough to allow the cultivation of corn four and a half feet high. The pressure of the feet will throw the machine out of gear, so that the driver may turn at the end of the row and begin another as soon as the pressure is removed. With an extra shovel I put in last fall about eight acres of wheat a day on fallow, and was highly pleased with the operation. I did not try it on corn land, but a gentleman in the Northern Neck informed me the other day that it answered admirably. On the whole, the implement is, in my judgment, adapted to the open fields of Maryland and Virginia, in the tide water region at least, and would save much labor and expense in the cultivation of our crops, while the cultivation itself would be effectual and sufficient.

Truly your friend and obedient servant,

R. A. CLAYBROOK.

LIME-KILNS.—A correspondent at Charlotte Hall, St. Mary's county, Maryland, writes:

Permit me to ask of you, or any of the many readers of the *Farmer*, the cost of and the best plan to construct a kiln or furnace with brick or stone to burn shell lime for a farm of 200 or 300 acres.—I have a great quantity of old shell banks on my farm, and I want a small furnace just for the use of the farm, as our mode of burning takes too much wood, and we get but a small quantity of lime.—From the above you will understand what information I want.

If any of our readers can give the information sought above we would be happy to hear from them. In the meantime we would refer our correspondent to the article published in the March number, page 83, on "Building Lime-Kilns."

CREAM THAT WILL NOT MAKE BUTTER.—A correspondent at Newtown, Md., makes the following statement, and asks a solution of the same. Who can tell him the cause?

"Can you or any of your readers inform me how to treat cream that we cannot make butter out of. My cow was fed on rutabagas and meal and fodder during the winter, and up to the first of March gave one and a half gallons of milk a day, and we had no difficulty in making butter. Since that period have failed in butter entirely; gives about one quart of milk daily now. Milk and cream rich and yellow. Have tried warming the pans, boiling the milk, salt, soda, and cattle powder, and everything else we could hear of. Cow in good condition—may possibly be with calf, though some think doubtful. Fed on brand and oats for a time, and is now in clover daily, yet no butter. Her appetite is very good, hence do not think she is diseased. Any information will be thankfully received."

The American Gardener's Assistant—Containing complete practical directions for the cultivation of Vegetables, Flowers, Fruit Trees, and Grape-vines. By Thos. Bridgeman. New edition—revised, enlarged and illustrated by S. Edwards Todd, New York.

We have received from the publishers, William Wood & Co., New York, a copy of this revised work, which so practically treats on the cultivation of Vegetables, Fruit Trees, Flowers and Grape-vines. Its directions are full and minute—the illustrations numerous, and is, altogether, a book which commends itself to all interested in Horticulture, Flowers and the Kitchen Garden. We advise our friends in need of a work of this description to procure a copy of the *Gardener's Assistant*. Cushings & Baily, agents, Baltimore.

"THE AMERICAN JOURNAL OF HORTICULTURE," for April, has been received, and, like former numbers, the present is an improvement upon the last. The present issue, contains more than sixty articles, contributed not only from different parts of New England, but from the great West and Southwest. Tilton & Co., Boston, \$3 per annum.

NORTH BRITISH REVIEW for March received—Leonard Scott Publishing Company, 38 Walker street, New York, \$4 per annum.

Horticultural.

THE CURRANT AND GOOSEBERRY.

The following we copy from the new edition of "*The American Fruit Culturist*," by J. J. Thomas, and published by Wm. Wood & Co., New York :

The Currant, from its hardness, free growth, easy culture, great and uniform productiveness, pleasant flavor, and early ripening, is one of the most valuable of our summer fruits.

It is propagated, like the Gooseberry, from cuttings, for which vigorous shoots of the last year's production should be chosen. Half the buds only at the top of the shoot should be left; and the plants may be kept trained up to a single stem a few inches high, when the branches should radiate on all sides in an upward direction, so as to form a handsome, spreading top. Currant bushes, if permitted to sucker moderately, will, however, endure for a longer time, as the new shoots, sending out roots of their own, afford, in fact, a spontaneous renewal.—But care is needed that they do not form too dense a growth.

The Currant being one of the hardiest and most certain fruit-producing bushes, it for this reason is badly neglected. Good cultivation and pruning will more than triple the size of the fruit. Old bushes should have the old and stunted wood cut out, and thrifty shoots left at regular distances.—Old manure should be spaded in about the roots, and the soil kept clean, cultivated and mellow.—As the Currant starts and expands its leaves very early, this work should be performed as soon as the frost leaves the soil.

Pruning the Gooseberry and Currant.—In the culture of the Gooseberry and Currant three distinct modes are adopted. The first, which is quite common in this country, is to plant the bushes along garden fences, where they often grow up with grass, and, being neither cultivated nor cared for, the fruit becomes small and of little value. This is the worst mode.

The next is to cultivate, but not prune them.—The fruit on such bushes is fine while they are young, but as they become filled with a profusion of old bearing wood it diminishes in size.

The third and best mode is to give them good, clean cultivation, and to keep up a constant supply of young bearing wood, yielding large and excellent crops.

The Currant and Gooseberry, like the Cherry, bear their fruit on shoots two or more years old; and it is important that a succession of strong young shoots be maintained for this purpose. The branches of the heads should therefore be distributed at equal

distances, and the old bearing spurs cut out when they become too thick or enfeebled, and new shoots allowed successively to take their place.

When the young Gooseberry or Currant bush is set out, all the buds or suckers below the surface of the ground should be previously cut off clean, so as to form a clear stem. It is often recommended that this stem be a foot high before branching—which does well for the moist climate of England; but under our hot suns it is better that the branches begin near the surface of the ground.

Old Currant bushes, such as have grown up to a thick mass, may be greatly improved, and will increase the fruit several times the size, by thinning out clean all the old crooked wood, and leaving a sufficient number of young stems at equal distances to bear the future crop.

The English Gooseberry, in this country, will remain free from mildew only so long as it is kept in a vigorous growing condition by frequent and judicious pruning, so as to give a constant succession of strong shoots.

STRAWBERRY CULTURE IN NEW JERSEY.

At a meeting of the Ocean County Fruit Growers' Club (New Jersey,) the Strawberry culture being under discussion, Mr. W. S. Jackson made the following statement :

Covered his Strawberry plants with cow manure, well rotted. He never covered the crown of his plants. Thought stable manure was apt to scald and rot vegetation. Manure should be put on before cold weather, and harrowed or furrowed in close to the berries before they begin to blossom in the spring; then mulch them and let them alone after giving them a thorough cleansing from grass and weeds, was not troubled with weeds. After testing the Wilson, Mr. Jackson said that when he was selling his Wilson in New York, at 25 and 30 cents per quart, the Triumph De Gand realized 75 cents per quart. The Triumph was richer flavor and brought better prices, but were not so large, and would not keep so long as Wilson. Manure in fall, close to roots as can safely be tilled, will start earlier in spring, and when set out in fall will usually realize, some bearing the next year. Set out 12,000 in November last, and lost but very few plants. If you set out in the spring don't let the plants fruit that season. Wilson would yield last week in May. Could pick from November setting, 18 bushels to acre the next season. Ordinary yield was 75 to 80 bushels to the acre. In setting out plants, 7,000 to acre, set rows 4 feet apart, and hills 15 inches apart; 10,500 to acre, 4 feet 12 inches. Let no runners grow until after fruit season, plough and harrow surface only four inches deep, set plants level with

the ground. Put on pine needles in spring before blooming. He sprinkled ashes between the rows, and the effect was remarkable. He stated that Mr. John C. Thompson, a great Strawberry cultivator, in New York, used ashes solely. The third crop was usually the best and most profitable.

FRUIT IMPROVED BY THINNING.

An article in the *Journal of Horticulture* has the following very judicious remarks on the propriety of thinning fruit:

The flavor of fruit, barring extreme sunless seasons, is entirely under the control of the gardener. A clever man can command flavor; a dull man, when he finds his fruit flavorless, makes idle excuses, which should never be listened to. If a tree trained to a wall be allowed to ripen, say ten dozen of fruit, when five or six dozen only should have been left, they, although they may be of a fair size and color, suffer in flavor to an extent scarcely credible. How often has the gardener had occasion to complain of his pears not being good, although produced on fine trees trained against walls? He complains of the season; but it is in most cases owing to the trees being allowed to bear just double the number they ought to have done. The following ought to be inscribed on every wall and in every orchard house: By thinning, you make indifferent fruit good. By crowding, you make good fruit bad. If very fine and high flavored fruit is wished for, a tree capable of bearing three dozen of medium sized peaches, should be allowed to bear only twelve or fifteen. This thinning is terrible work for the amateur. It is like drawing a tooth, and every fruit that falls to the ground creates a pang; but it must be done. A small sharp penknife is the best instrument to employ, and is much better than tearing off the fruit with the finger and thumb. A well formed peach or nectarine tree, be it bush or pyramid, with its fruit properly thinned and nearly ripe, is one of the most beautiful articles the skill of the cultivator can produce.

Let any one who is raising fruit, try the experiment this season, by thinning the fruit on a single tree of apples, peaches, pears, plums, &c., where the fruit is too abundant, and he will next year treat all his trees in the same way.

A GREAT NEWSPAPER SUCCESS.—We have before spoken of *Moore's Rural New-Yorker*, originated and still conducted by Hon. D. D. T. MOORE, as an "institution" of great value and popularity, and we are pleased to learn that the present (18th) volume promises to be far more valuable and popular than any of its predecessors. It commences with a *bona fide* edition of 75,000 copies, and the receipts the first week were over \$5,000 per day! The success of the *RURAL*, unparalleled in the history of similar publications, is based upon its merits alone.—*Roch. Daily Dem.*, Jan. 14, 1867.

SEASONABLE HINTS.

From the April number of the *Horticulturist* we glean the following hints:

DAHLIAS for early flowering may now be potted, or otherwise placed for heat and growth in the greenhouse or frame. Plants started now will give flowers in July, but those who desire to grow superior blooms will keep the tubers back a month or two. Some of the best blooms we ever saw were grown on plants not started until the middle of June.

GET the cultivator and light plough going among your vineyards, and fruit orchards, and gardens as soon as the ground will answer. Don't work clay land while it is wet. Plough very shallow next the bodies or main stems of trees and vines, going deeper as you work from them.

If you have neglected to prune back your hardy roses, do it now, cutting the hybrid perpetuals close to the ground, and the mosses down one-half.—Also, if a tree has escaped its due washing, and has upon it—little white spots—insects, or bits of moss, etc., get some strong soapsuds, or weak lye, or potash water, and wash it all over before the buds push.

SPRING budding with the peach, magnolia, etc., may be performed successfully this month. Cut the buds some days, say a week or so, in advance of setting, and keep them in a cool place, letting the tree get a little advance of the cion or bud.

VINEYARD vines should now be tied neatly to the wires or stakes, and as the buds break, watched carefully to see if they do so evenly. Should the end buds swell strongly, while the middle buds remain dormant, bend the cane over in the form of an arch, and tying keep it there until all the buds have burst forth alike. In some sections where we are read, the buds around the crown or base will now require washing, and all that start over and above the number wanted to form canes another year should be at once rubbed out.

LAWNS should be rolled and mown frequently at this season; by so doing the roots or crowns will tiller more abundantly, and each rolling while the ground is yet soft will aid in pressing into smooth surface any inequalities.

CUTTINGS of currants, gooseberries, flowering shrubs, etc., may yet be made and planted; but they should be carefully mulched, else the feeble young roots which they will make in the early season will dry up on approach of heat and drought.

WHEN first stirring the soil, on seed beds, around the young growing plants, use a steel rake rather than a hoe. One trial will satisfy any one of its superiority.

The following seasonable items we clip from the *Germantown Telegraph*:

BUDDING.—June is the time for budding, and it can be continued to the last week in July. Cherries and peaches grow much readier by budding than grafting. Pears can also be budded, but for these we prefer the ordinary mode of grafting.

MULCHING.—Trees planted this year should be well mulched. Grass, hay, straw or old stable manure can be used. It has an excellent effect in protecting young trees against drought, from which they usually suffer so much. Raspberries and blackberries should also be deeply mulched. They like a deep, cool, moist soil.

LOOK AFTER YOUR GRAFTS.—In the summer many rapidly-growing grafts become so loaded with foliage as to break off during a storm, and especially when covered with water. Such grafts should be shortened by clipping off one-half. Others grow very slowly and feebly, which is frequently owing to the sprouts growing on the stock in which the grafts are set.—Remove these as fast as they appear, and the grafts will soon start ahead.

SUMMER PRUNING.—The last of June and the beginning of July is the best time to prune with the view of producing fruit. All non-bearing trees and rapid growers should be subjected to a pretty severe shortening-in of the branches. It usually makes much handsomer trees, and they almost invariably fruit two or three years earlier with young trees and insure an annual crop where they are not allowed to overbear. Of course this pruning has reference only to trees making considerable young wood.

THINNING OUT FRUIT.—All fruit trees that can be readily managed on account of size, and overbear, should have the fruit thinned out. We generally go over all our small pear trees two or three times, removing the least thrifty, especially where they are in clusters. A tree that overbears seldom produces any good fruit and is sure to be barren or nearly so the ensuing year; whereas where only a moderate crop is allowed to grow, the specimens are double in size, superior in quality and the tree is likely to afford an annual yield.

Bread, beer, buttermilk, and butter to some extent, directly after being made rapidly exchange carbon for oxygen with a proportional improvement in wholesomeness.

Bread, when thus ripened, is computed to contain twenty per cent. more nutriment than when hot from the oven. It is important that these articles ripen in a pure atmosphere, as they freely absorb unwholesome ingredients of the air around them.—*Scientific American*.

Best Way of Cultivating Large Orchards.

Many have found a practical difficulty in the way of cultivating large orchards with hoed crops when the trees are planted equal distances each way, by not wanting so much land in those crops and being obliged to cultivate the whole surface while the trees are young. In commencing a forty acre orchard, I have planted a few acres in rows three rods apart one way by one other. Some of the advantages of this are: With the use of a two-horse plow and cultivator, a space each side of the trees more or less extended as the roots advance, can be kept clean quite cheaply, and the remaining part of the land is unobstructed for the use of the reaper and mower in gathering crops of grass or grain. Every alternate tree in the row can be an early-bearing variety, to be taken out when they interfere, and for pears it is a good thing to have plenty of trees after the blight takes its share. By deep plowing on the line where the trees are to be set, and then forming something of a ridge with the plow, a deep soil is had to give the tree a start.—*Cor. Country Gentleman*.

Meeting of the Trustees of the Maryland Agricultural and Mechanical Association.

The Trustees named in the act of incorporation met at the office of the Association 24th of April, the following gentlemen being present: Messrs. Bowie, Devries, Merryman, Hardcastle, Ulery, George, Dennis, Whitman and Mules.

Upon motion, Colonel Oden Bowie, of Prince George's county, was selected as Chairman of the Board, E. Law Rogers, Esq., Secretary, and Wm. Devries, Treasurer.

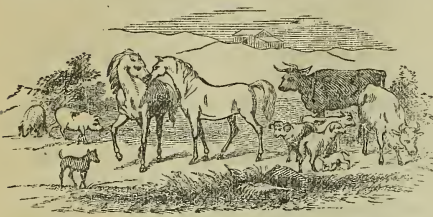
Mr. Merryman, from the Executive Committee, presented the descriptions of the property offered for a show ground, which were referred to a committee consisting of Messrs. Devries, Dougherty and Merryman, with instructions to report at an adjourned meeting.

Messrs. Dennis, Rogers, Hardcastle, Ulery and Merryman were appointed a committee to establish regulations for the management of the grounds.

Upon motion, the Secretary was directed to inform the Trustees when the Committee on Examination of Property would be ready to report.

HOW TO KEEP MEAT FRESH.—As farmers are at a distance from meat markets, the following directions for keeping meat may be of use to those that try it: Cut the meat in slices ready to fry. Pack it in a jar in layers, sprinkling with salt and pepper, just enough to make it palatable. Place on the top a thick paper or cloth, with salt half an inch thick. Keep this on all the while. I have kept meat for three weeks in the summer, and the last was as good as the first.—*FARMER'S WIFE in Rural American*.

Live Stock Register.



HOW TO SELECT A HORSE.

The Turf is now such an important element in the United States that many gentlemen, who know but little of the good qualities of stock, are ambitious to become the owners of race horses. They attend the different sales, but hesitate about making a purchase, because they have not had sufficient experience to give them confidence in their own judgment. A horse may please the eye at first glance, and yet be deficient in excellent qualities. For this reason the inexperienced require definite rules by which they may be guided or, at least, assisted when passing judgment upon the merits of the highest type of the equine race. Entertaining this opinion, we are induced to extract a few notes from an old volume. In choosing a race horse, by his external appearance, we are told, that we must judge of his symmetry by angular demonstration: "1st. Draw a base line from the stifle joint along the bottom of the chest to the extreme point of the elbow, and to the shoulder blade joint. 2d. Draw a line from the curb or hock by the hip joint above the back, to an imaginary point. 3d. Draw another line from the point of the shoulder, ranging with the shoulder and passing above the back until it intersects the line at the imaginary point. 4th. Draw a line from the intersecting point of the shoulders, giving the same declension until it intersects the base line. 5th. From the stifle to the point of the buttock, thence to the hip joint, thence declining to the stifle. 6th. Draw a line from the hip to the base line, right angular declension, then to the shoulder up to the crest. 7th. Then draw a straight line, regardless of the curve of the back, to a straight line intersected at the shoulder at the beginning of the crest. 8th. Then take a line from the point of the shoulder, and angular degree, ranging with the shoulder blade to the top of the crest. 9th. Then, regardless of the rising of the crest, draw a straight line from the top of the shoulder blade to intersect with the point of the former line." Having followed these comprehensive directions, we are told that

the "real symmetry of a grand and beautiful horse, possessed with muscular powers and strength, is formed by a right-angled triangle; and the farther from it a race horse's form is, the less pretensions that horse has to beauty, speed, bottom, or lastingness, ability to carry weight, or activity." In addition to the above rules, it should be remembered that a low coupling in the back is a mark of weakness; a thick, upright shoulder indicates a stumbler, while great declivity and a thin shoulder denote speed. A narrow breast is a sure sign of weakness, as is also a low loin. The rising loin is a mark of muscular strength, of ability to carry weight, of speed and endurance. A short and broad hock denotes strength, while a broad stifle, well let down, is a sign of activity and lastingness. Especial attention should be paid to the knees, which should be small but compactly formed, suggesting the idea of iron-like strength. As a general thing, a long horse is preferable to a short one, because his stride is greater, which, of course, gives him a higher degree of speed. These suggestions may greatly assist the inexperienced, for one is not competent to decide upon the merits of a race horse without having given the subject the closest study. —*Turf, Field and Farm.*

JERSEY COWS.

Mr. John Giles, of South Woodstock, having had very many letters of inquiry respecting this breed, their milking qualities, calves, &c., thus answers through the *Rural New Yorker*:

First. Their calves are red and white, yellow and white, gray and white, and cream-colored. The cattle should be yellow round the eyes, and within the ears, bordering on the orange color; the best animals have a yellow tinge at the root of the tail; here is a similar color in the butter made from their milk.

Second. The size and form of the Alderney differs but little from the Jerseys; they should have a fine, slender nose, a fine skin and deer-like form.—The Guernsey cattle are larger boned, taller and coarser in all respects, and have a less fine coat.—From the Island of Alderney there are not over fifty cows exported a year, as the Island will not sustain over 400 cows. From the Island of Jersey there are more exported, as the Island is some six miles wide and twelve miles long. A great many cows that are sold as Alderneys or Jerseys, are not Channel Island cows at all, but small Breton and Norman cows, whose value is little more than one-fourth of the pure Jersey.

Third. *Price of Cows on the Island.*—A good cow will readily bring from \$125 to \$150. Some more than that. Young stock, of course, can be bought lower.

Fourth. In the year 1854, I went out to Europe to purchase stock—sheep, swine and the Jersey cows, since then, we have kept and raised the pure Jersey stock, importing from time to time to keep up the pure blood. We never did import a Jersey cow but cost us at home \$200 and upwards.

Fifth. *Our own Experience as to Milk and Butter.*—They are not deep milkers, seldom giving over 25 to 32 pounds of milk per day. We had one which we sold to the Rev. Henry Ward Beecher, that gave 42½ pounds of milk per day. As that gentleman justly observed, "the Jerseys did not give much milk, but what they did give was all cream." The most butter per week we ever had a Jersey cow give, was 16 pounds. We consider 14 pounds per week an average. Some talk of 18 to 20 pounds per week. We have never had the good fortune to own or see such cows. Some say that from four to six quarts of milk will make one pound of butter.—Such has not been our experience. We say from five to seven quarts will make one pound of butter, and such butter that will make an epicure's lips smack.

Sixth. I was born on a farm; always had a taste for stock. Nearly sixty years ago I used to see the Jerseys before the mansions of the aristocracy in England (for, be it known, I am a John Bull by birth, and have been nearly forty years in Yankee land,) with strap round the neck, and long chain attached to a movable shed on the lawns, kept for their rich cream and butter. I then admired their deer-like form, little thinking at that time that I should ever be one that would import such valuable animals into this, my adopted and beloved country.

SHEEP WORK IN JUNE.

Fences are to be put in perfect order, dry burrs and thistles to be eradicated from the pastures—and if it has not already been done, flocks should at once be sorted and put on different fields, as recommended in May. This is very important.

The first business proper of June is washing. Public and frequent places of washing should be avoided if practicable, to escape the contagion of foot-rot and scab. Almost any little brook can be made to answer the purpose by constructing a light temporary dam, and conducting the water through a trough into a kettle or vat large enough to dip a sheep in.

Many trim the hoofs of sheep at washing—when they are cleaned and softened by immersion of the animal. This will do very well if the hoofs are free from rot, and if therefore, they require neither extra care in paring nor the application of remedies.

The time between washing and shearing should vary according to temperature. The yolk starts

more quickly in hot weather, and it should have time to circulate through the wool sufficiently to render it soft and glossy. To this extent the manufacturer does not object to its presence.

The mode of shearing cannot be described in the limits of this article. It should be neatly done—the fleece carefully gathered up and arranged on the folding-table, and folded so that none but the inside ends of the wool from the back and shoulders of the sheep will show—and then pressed together and tied in a wool press.

It is inexcusable and fraudulent to do up dung or any other extraneous substances in wool. All burred fleeces should be put by themselves—the buyer apprized of their condition, and invited to open as many as he pleases. As burrs are not visible in a properly done up fleece, to omit to apprise the buyer of their being in the wool is as much an act of dishonesty as it would be to sell rolls of butter containing hair and dirt. For neither ought the buyer to be considered bound to look, where the surface is clean.

Wool pulled from sheep which die of disease or poverty, ought not to be put in sheared fleeces. If unwashed, while the fleeces are washed, it is a flagrant fraud. If as clean as the wool, it is still a petty fraud—for "dead wool" is less valuable, and pulled wool should not be mixed with sheared.

Wool should be stored away in a clean, dry room, which is vermin proof and insect proof, and where no dust can enter. It shows best in a good north light. But exposure to light and air yellows it in a few months, and it is better, therefore, to cover it with cloths of some description. If there is sufficient space in the wool room, it is well to arrange the piles of wool so that they nearly all the fleeces are visible to the examiner, without moving them. If the wool must go in large thick piles, the fleeces of each pile should be arranged indiscriminately—not the best selected and placed in front. When the buyer finds the wool thus "faced," he often acts upon the supposition that the wool in the back part of it is worse than it actually is.—Every buyer has a fair right to "open the pile," without giving offence to any person. Indeed he ought to open it as much in justice to the seller as to himself.—*Working Farmer.*

THE RURAL NEW-YORKER, as a newspaper enterprise has no parallel. It has gone on for years increasing in the favor of its patrons, until it now has a greater circulation by tens of thousands than any other weekly in the country which gives prominence to agriculture and kindred branches of industry. There is no paper like it. It has a field of its own, and all attempts to divide or divert its patronage have thus far proved futile. It is a live newspaper, treating in a candid, able, and above all, an independent manner, the topics which it presents to its readers.—*Roch. Daily Union, January 3, 1867. See advertisement in another column.*

USEFUL RECIPES

SCRATCHES.—We recommend the following as a good remedy: Pyroligneous acid, linseed oil, turpentine, of each equal parts. Mix. Let the heels first be washed with luke-warm water and soap; then wiping them dry, apply the mixture twice daily. The feet and heels of horses should never be left wet after having been worked in muddy soil, and then be exposed to drafts of cold air.

PRURIGO.—How shall I prevent a horse from rubbing his tail; and what will make the hair grow, when it has been rubbed off? Answer—A case of this description requires nothing beyond some modification of the stable regimen: bran mashes in lieu of corn; green meat, if it be in the season, or additional work. The itchiness may be relieved by using a lotion composed of half an ounce of sulphuric acid, and a quart of water; with this the parts are to be wetted.

LICE.—Among the various remedies recommended for lice, some are very dangerous, especially the preparations of mercury and arsenic. The following formula is both safe, and destructive to lice: Stavesacre seeds, four ounces; white hellebore, one ounce. Boiled in a gallon of water until only two quarts remain. Apply with a brush to those places where the lice are seen.—*N. W. Parran, Prairie Farmer.*

HORSE DISTEMPER.—The following gives the greatest relief of anything the writer has ever tried: Burn equal parts of hog's hair and cotton or linen rags in a kettle, and let the animal breathe the smoke.—*Cor. Rural American.*

SWELLED JAW IN SHEEP.—An old and experienced farmer says that this can be effectually cured by rubbing the jaw and cheek, inside the mouth, and also beneath the tongue, with equal parts of salt and alum. He has used this remedy on his own flock for swelled jaw and it never failed to perform a quick and perfect cure.

WARTS ON HORSES.—H. H. How, of Nebraska, says:—"Mix equal quantities of spirits of turpentine and sulphuric acid, stirring slowly in a tumbler—afterwards bottle the mixture. Rub grease around the base of the wart and then apply the medicine to the wart with a feather once or twice a day; it will gradually eat them off. I have thus taken them off a horse's neck when as large as a turkey's egg.

HOW TO RAISE A CALF WITHOUT MILK.—As it may prove beneficial to some of your readers, I will give you the experience of a friend in raising a calf. The mother of the calf died when it was a week old, and not having milk to give it, my friend made a paste of water and flour, to which he added a little salt, an egg, and molasses enough to sweeten the whole, which he then boiled, and when cold fed to the calf. It grew finely on this diet, was fat and sleek all the time, and is now a fine two year old.—*Cor. Rural American.*

BLOOD SPAVIN.—To cure blood spavin on horses, take one ounce origanum oil, one ounce oil spike, one ounce spirits hartshorn. Shake well together before using, as the origanum will rise on the top. When it is thoroughly blistered, which will take three or four applications, twice a day, apply sweet oils. Blister three or four times.

KEEPING PIGS CLEAN.—Farmers who want to keep their pigs in the best possible growing condition, should wash them once a week with buttermilk. It will kill all vermin on them, if they should be so infested.

CHICKEN CHOLERA.—Let the chickens have the free use of lime, and they will not be exposed to the ravages of the cholera.

TURPENTINE.—A destructive agent in cases of worms in hogs. From twenty to fifty drops may be given.

SHELTER FOR SHEEP WHILE AT PASTURE.—Solomon Green, of Townsend, Massachusetts, who says he has kept sheep thirty years, advises to have small buildings erected in sheep pastures, and that they should be dark, so that the sheep, by going into them, may avoid flies. He says the sheep will go in at eight o'clock in the forenoon and remain till four o'clock in the afternoon. "The house," he says, should be built on runners, so that it can be moved, and this will enrich the land. A house 12 feet square is sufficient to hold a dozen sheep and their lambs. Move it its length once in two or three weeks." He sends the following, which he says is a "sure cure for grub in the head and belly of sheep:" For six sheep, mix two quarts of oats with a large teaspoonfull of yellow snuff, and give to the sheep once a week for a few weeks, and then once a month..

HOW A LADY SHOULD SIT A HORSE.—A lady's horse to be perfect, should be all over handsome, and well upon his haunches. If slightly hollow in the back, so much the better, for it generally tends to ease in action, and to less motion in the saddle. A lady should never be hard upon the saddle—that is there should be no bumping noise, not even in a trot. She should sit closely, and when rising to the trot possess such elastic motion from the foot to the knee and waist that her return to the saddle should be as light as a feather. She should sit square to the front, and her horse's ears (to speak like a soldier) ought to dress well with the buttons on the bosom of her habit. Nothing so bad as to sit with a lean to one side, and when admirers are following after, to let them fear that a very little would cast her off from the stirrup side of the saddle. Her hands should be down, but light, and her arm, as well as every inclination of her figure, should harmonize with the motions of her steed, as if both possessed the same volition.

A POWERFUL FERTILIZER.—Every farmer has soot at command, whose presence in stove pipes or chimneys is not unfrequently the cause of fires, occasioning the loss sometimes of both property and life. This agent for evil is one of the most valuable manures, and nothing but the most culpable carelessness and indifference will suffer it to remain a standing menace to life and property, when it can be easily removed and turned to good account in the field or garden. Twelve quarts of soot in a hog-head of water will make a powerful liquid manure, which will improve the growth of flowers, garden-vegetables, or root crops. In either a liquid or solid state, it makes an excellent top-dressing for grass or cereal crops.

By and by is always too late.

Ladies Department.

THE LOCK OF HAIR.

BY GEORGE D. PRENTICE.

How often has this lovely curl
Been bound with flowers and decked with pearl—
How oft round snowy fingers twined,
How oft wooed by the amorous wind;
And oh! how oft at midnight hour,
When slumber reigned in hall and bower,
This curl, soft-nestled like a dove,
Has heard the whispered dreams of love.

This lovely tress—this raven tress—
That oft to heart and lip I press;
I know not if it used to deck
The Parian whiteness of her neck;
Or o'er her blue-veined temple strayed,
Or on her beaming brow was laid,
Or fell upon the stainless snow
Of her young cheek;—I only know
It is the loveliest of curls,
And from the loveliest of girls!

Aye, 'tis a thing to love and bless,
This little dark and shining tress;
Dark as the midnight forest's gloom,
Dark as the tempest spirit's plume,
Dark as the stern Death-Angel's seat,
But shining as the battle steed.
And she, by whom this gem was given,
Seems to my heart a thing of Heaven—
An angel dream—a gentle dove
Sent forth from God's own ark of love—
A vision come from Paradise
Awhile to gladden mortal eyes—
A star, of Heaven's own stars the pride,
Glossed in this dark world's stormy tide.

BEETHOVEN'S MOONLIGHT SONATA.

It happened at Bonn. One moonlight winter's evening I called upon Beethoven, for I wanted him to take a walk and afterwards sup with me. In passing through some dark narrow street he paused suddenly.

'Hush?' he said, 'what sound is that?—it is from my symphony in F,' he said eagerly. 'Hark how well it is played!'

It was a little, mean dwelling; and we paused outside and listened. The player went on; but in the midst of the finale there was a sudden break, then the voice of sobbing. 'I cannot play any more—it is so beautiful, it is so utterly beyond my power to do it justice. O! what would I not give to go to the concert at Cologne.'

'Ah, my sister,' said her companion, 'why create regrets when there is no remedy? We can scarcely pay our rent.'

'You are right; and yet I wish, for once in my life to hear some really good music. But it is of no use.'

Beethoven looked at me.

'Let us go in,' he said.

'Go in!' I exclaimed. 'What can we go in for?'

'I will play to her,' he exclaimed, in an excited tone.—'Here is feeling—genius—understanding. I will play to her and she will appreciate it.' And before I could prevent him, his hand was upon the door.

A pale young man was sitting by the table making shoes; and near him, leaning sorrowfully upon an old-fashioned harpsichord, sat a young girl, with a profusion of light hair falling over her bent face. Both were cleanly but very poorly dressed, and both started and turned towards us as we entered.

'Pardon me,' said Beethoven, 'but I heard music and was tempted to enter. I am a musician.'

The girl blushed, and the young man looked grave—some what annoyed.

'I—I also overheard something of what you said,' continued my friend. 'You wish to hear—that is, you would like—that is—shall I play for you?'

There was something so odd in the whole affair and something so eccentric and pleasant in the manner of the speaker, that the ice seemed broken in a moment, and all smiled involuntarily.

'Thank you,' said the shoemaker; 'but our harpsichord is so wretched, and we have no music.'

'No music,' echoed my friend. 'How then does the Fraulein—'

He paused and colored up, for the girl looked full at him, and he saw that she was blind.

'I—I entreat your pardon,' he stammered; 'but I had not perceived before. Then you play from ear?'

'Entirely.'

'And where do you hear the music, since you frequent no concerts?'

'I used to hear a lady practising near us when we lived at Bruhl, two years ago. During the summer evening her windows were generally open, and I walked to and fro outside to listen to her.'

'And have you never heard any music?'

'None except street music.'

She seemed shy, so Beethoven said no more, but seated himself quietly at the instrument, and began to play. He had no sooner struck the first chord than I knew what would follow—how grand he would be that night. And I was mistaken. Never, during all the years I knew him, did I hear him play as he then played to that blind girl and her brother! He was inspired and from the instant that his fingers began to wander along the keys, the very tone of the instrument began to grow sweeter and more equal.

The brother and sister were silent with wonder and rapture. The former laid aside his work; the latter, with her head bent slightly forward, and her hands pressed tightly over her breast, crouched down near the end of the harpsichord as if fearful lest the beating of her heart should break the flow of those magical sweet sounds. It was as if we were all bound in a strange dream, and only feared to wake.

Suddenly, the flame of the single candle wavered, sunk, flickered, and went out—Beethoven paused, and I threw open the shutters, admitting a flood of brilliant moonlight. The room was almost as light as before, and the illumination fell strongest upon the piano and player. But the chain of his ideas seemed to have been broken by the accident. His head dropped on his breast—his hands rested upon his knees—he seemed absorbed in meditation. It was thus for some time.

At length the young shoemaker rose, and approached him eagerly, yet reverently,—'Wonderful man,' he said, in a low tone, 'who and what are you?'

The composer smiled as he only could smile, benevolently, indulgently, kindly,

'Listen,' he said, and he played the opening bars of the symphony in F.

A cry of delight and recognition burst from both and exclaiming:

'Then you are Beethoven!' they covered his hands with tears and kisses.

He rose to go but we held him back with entreaties, 'Play to us once more—only once more!'

He suffered himself to be led back to the instrument. The moon shone brightly in through the window, and lit up his glorious head and massive figure. 'I will improvise a sonata to the moonlight!' looking up thoughtfully to the sky and stars—then his hands dropped upon the keys, and he began playing a sad and infinitely lovely movement which crept gently over the instrument like the calm flow of moonlight over the dark earth. This was followed by a wild, elfin pas-

sage in triple time—a sort of grotesque interlude like the dance of sprites upon the sward. Then came a swift *agitata finale*—a breathless hurrying, trembling movement, descriptive of flight and uncertainty, and vague, impulsive terror, which carried us away upon its rustling wings, and left us all emotion and wonder.

'Farewell to you,' said Beethoven, pushing back his chair, and toward the door; 'farewell to you.'

'You will come again?' asked they in one breath.

He paused, and looked compassionately, almost tenderly, at the face of the blind girl. 'Yes, yes,' he said hurriedly.—'I will come again and give the Fraulein some lessons. Farewell! I will soon come again!'

They followed us in silence more eloquent than words, and stood at their door till we were out of sight and hearing.

'Let us make haste back,' said Beethoven; that I may write out that sonata while I can remember it!'

We did so, and he sat over it till long past day-dawn.—And this was the origin of that Moonlight Sonata, with which we are all so fondly acquainted.

MOST THRILLING ADVENTURE.

A TALE OF OLD VIRGINIA.

It was about the year 1805, that I settled in Virginia, near the falls of the Kanawha. The country, at the time, was an unbroken wilderness. But few settlements had been made by the whites, and they were so far apart as to render vain all hopes of assistance in case of attack from hostile Indians, numbers of whom still infested the neighborhood.

I lived there alone with my wife for several months unmolested, and by dint of perseverance, then young and hardy, had succeeded in making quite a clearing in the forest, which I planted with corn, and which promised an abundant yield. One morning after we had dispatched our humble meal, and just prepared to venture forth upon my accustomed routine of labor, my attention was arrested by the tinkling of a cow bell in the corn-field.

"There," said my wife, "the cow is in the corn-field."

But the ear of the backwoodsman becomes by education very acute, especially so, from the fact that his safety often depends upon the nice cultivation of that sense. I was not so easily deceived. I listened. The sound was repeated.—"That," said I, in reply to my wife's remark, "was not the tinkle of a bell upon the neck of a cow, but a decoy from some Indian, who wishes to draw me into ambush."

Believing this to be the case, I took down my old musket, and seeing that it was properly loaded, I stole cautiously around the field towards the spot from which the sound seemed to proceed.

As I suspected, there in a clump of bushes, crouched an Indian, waiting for me to appear in answer to his decoy bell, that he might send a fatal bullet to my heart. I approached without discovering myself to him, until within shooting distance, then raised my piece and fired. The bullet sped true to its mark, and the Indian fell dead.

Not knowing but that he might be accompanied by others, I returned with all speed to the cabin, and having firmly barricaded the door, I watched all day for the companions of the Indian I had killed. To add to the danger and seeming helplessness of my situation, I discovered that I had but one shot left, and if attacked by numbers, I should be entirely in their power. Determined to do the best with the charge of powder, I put it into the musket, and then waited for the approach of night, feeling sure of an attack.

Night came at last. A beautiful moonlight it was too, and favored me greatly, as I would thereby be able to observe the movements of the enemy as they approached the cabin.

It was some two hours after nightfall, and yet I had neither heard nor seen a sign of the Indians, when suddenly I was startled by the baying of my dog at the stable. The stable stood a little to the west of the cabin, and between the two was a patch of clear ground, upon which the light of the moon fell unobstructed. Judging from the noise at the stable that they would advance from that direction, I posted myself at the porthole on that side of the cabin.

I had previously placed my wife on the cross-pole in the chimney, so that in case our enemies effected an entrance into our cabin, she might climb out through the lower chimney and effect her escape. For myself I entertained no hope; but determined not to be taken alive, and to sell my life dearly.

With breathless anxiety I waited at the porthole. At length I saw them emerge from the shadow of the stable, and advance across the open ground towards my cabin. One—two—three—great heaven! six stalwart Indians, armed to the teeth, and urged on by the hope of revenge, and I alone to oppose them, with one charge of powder. My case was desperate, indeed. With quick and stealthy steps, in close, single file, they approached, and were already within a few yards of the house, when a slight change in the movement of the forward Indian changed the position of the six, so that a portion of the left side of each was uncovered.

They were in range, one aim would cover all. Quick as thought I aimed and fired. As the smoke cleared away I could hardly credit what my senses showed me as the result of my shot. The fifteen slugs with which I had loaded the musket, had done their work well, five of the six Indians lay dead upon the ground, and the sixth had disappeared.

Although no enemies were now in sight I did not venture forth until morning. There lay the bodies of the five Indians undisturbed, together with the rifle of the other. Securing the arms and ammunition of the fallen Indians I followed up the trail of the missing one until I reached the river, beyond which point I could discover nothing. From the amount of blood which marked his trail, together with unmistakable evidence that he had picked his way with difficulty, I was led to believe that he was mortally wounded, and in order to prevent his body falling into the hands of the white foe, he had groped his way to the river, and thrown himself in the current which had borne it away.

The Indians had killed my cow, and that, you may be assured, was no trifling loss, yet in my gratitude for my escape from the merciless savages, I would have made greater sacrifices. I was well provided by means of arms and ammunition taken from the six Indians, in case of a second attack, but this, fortunately, proved to be my last adventure with the savages.

Not one of the band had escaped to tell the tale, and incite his brethren to revenge the death of his comrades.

"Ah!" exclaimed the old man, while the tears gushed from his eyes, at the memory of that eventful night, "that was a glorious shot—the best I ever made!"

Challenge Washing Machine.

We refer the reader to the advertisement of this Washing Machine manufactured by S. W. Palmer & Co., Auburn, New York. The manufacturers have sent us, per Adams Express, one of these machines to test practically its efficiency, being convinced that we will find it all they claim for it—"that it fully and in every particular achieves the end sought, and we challenge the world to produce its equal in every desirable particular." That is pretty strong, when we remember the many machines now offered for lessening the annoyances of "Washing Day." It is simple in construction, light in weight—weighing but 30 pounds—and costs but \$7 to \$9. It is now in the hands of an expert who will give it a thorough trial, when we will report fairly the result.

DOMESTIC RECIPES.

EXCELLENT PUDDING.—A correspondent in Macon, Geo., sends us the following: "I send you the recipe for a desert which my wife made. It was an impromptu recipe, or rather no recipe, but she put together the ingredients, and the excellent pudding was the result. I know of nothing that suits my taste as well:—1 pint sifted flour; 2 eggs; $\frac{1}{2}$ cup butter; 1 teaspoonful soda; 2 do. cream tartar; 1 cup sweet milk; $1\frac{1}{2}$ cups sugar; flavor to suit fancy. Eat with wine or butter sauce.

FLEAS AND MOSQUITOES.—A correspondent of the *Scientific American* says "that oil or essence of pennyroyal is believed to be a specific against the attack of fleas. I have always used it when fleas were in my bed or about my clothing, and found that it would banish them entirely, and am now using it with equal success to banish mosquitoes. They will not come near where it is."

HAIR OIL.—The use of any oily substance upon the hair is injurious, and not alone to the health and beauty of the hair, but to the scalp and brain. It mats the hair close down upon the head, forming an impervious cap, which prevents all evaporation from and ventilation of the scalp, thus over-heating the scalp and brain, and weakening the roots of the hair. The use of water promotes the cleanliness of the scalp and hair, aids evaporation, helps to prevent any over-heating of the parts, invigorates the roots of the hair and consequently strengthens and beautifies the hair.—*Journal of Health.*

POOR MAN'S PUDDING.—Half a pint of molasses; half pint boiling water; one teaspoon soda, and a little salt.—Flour to make as stiff as sponge cake. To convert it into a rich man's pudding add one cup chopped raisins and one cup chopped suet. Steam two or three hours. Serve with liquid sauce or sugar and cream.

Sauce for Above.—One cup of brown sugar, 1 of water, $\frac{1}{2}$ cup butter, worked together with a teaspoon of flour; after it boils, stir in half a cup of brandy or other spirits. Vinegar or lemon juice will answer in war times.

RAISED INDIAN PANCAKES.—One quart of water, one pint of Indian meal, one teacup of flour. Add yeast and set over night for breakfast.

HOW TO HAVE MEALY POTATOES.—It is a very common thing in the spring to find strong, watery potatoes on the table, unless care has been taken to select and preserve them. A poor potato is the poorest article of food that can be had; and as soon as they begin to sprout they will begin to grow poor and watery, the better part of the root going to the support of sprouts; hence, to have mealy, nice potatoes it is necessary to 'keep them from exhausting themselves in this way. An exchange gives the following method of preventing the potatoes from sprouting, which we hope will be tried and approved. Take good, sound potatoes and place them in a tub or barrel, and pour boiling water over them, letting them remain in the water until the eyes are scalded so they will not sprout; dry the potatoes thoroughly in the sun, and put them away in a box or barrel in a cool, dry place. This will give good mealy potatoes all the time.

HOW TO COOL WATER.—If it is desired to cool water for drinking in warm weather, and ice cannot be obtained for this purpose, let it be kept in an unglazed earthenware pitcher wrapt around with two or three folds of course cotton cloth kept constantly wet. The theory of cooling water in this manner is the absorption of heat from it, by the evaporation of the moisture in the cotton cloth—expansion produces cold, compression heat.—*Germantown Telegraph.*

THE HOUSEHOLD.

Dirt Under Furniture.—For a long time I was troubled in sweeping floors, to get the dust from the carpet where bureaus and other heavy furniture were standing.—At last I hit upon a way which pleased me, and I am going to tell it to those who look for useful hints in *The Western Rural*. It is this: Sprinkle a sheet of coarse brown paper with clean water and rub this across the carpet in places which you cannot reach to sweep. The dust will collect in little rolls which the roughness of the paper will bring away.

To Raise the Pile on Velvet.—We are sometimes asked "What is the best thing to do with a velvet mantle after it has been in the rain?" Velvet that is rough and knotty, from rain spots and splashes, can be rendered smooth again by thoroughly damping the back of it, and then passing the back of the velvet over a hot iron—the velvet, remember, must be passed over the iron, and not the iron over the velvet. The heat converts the water into steam, which rises through the pile, and so separates every filament. Some contrivance must be made to hold the iron upside down while the velvet is passed over it. If rested between two bricks covered with flannel, it will do very well; but if the same pair of hands that carried the umbrella over the mantle when it was out in the rain can be secured for that office, they will be found suitable.

To Whiten Linen.—Stains occasioned by fruit, iron rust, and other similar causes, may be removed by applying to the parts injured a weak solution of the chloride of lime—the cloth having been previously well-washed—or of soda, oxalic acid, or salts of lemon in warm water. The parts subjected to this operation should be subsequently well rinsed in soft, clear warm water, without soap, and be immediately dried in the sun.

To Keep Butter Sweet in a Cask.—We find the annexed flying paragraph in some of our agricultural contemporaries, and do not know how much it is worth, but it looks right, and on this ground we print it:

"A compound of one part sugar, one part nitre, and two parts of the best West Indies salt, beat together into a fine powder, and mixed thoroughly with the butter in proportion of one ounce to the pound, has been found to keep the butter in every respect sweet and sound during two years that it was in cask. It is also said to impart a rich marrowy flavor that no other butter ever acquires, and tastes very little of the salt."—*Germantown Telegraph.*

Rugs.—It is muddy out of doors—in the house, grandmother says, with a sly, good-natured glance at those boots which are always sure to find mud, and the bottoms of pants or skirts with unfortunate tendency. There is an old piece of carpet or a what do you call it?—a rug very conspicuous on the steps on the front and back door, which you are expected to wipe your feet on ere you go in. You forget it till the door closes behind you; then somebody calls from beyond in a sharp, shrill voice, "Wipe yer feet, sir!" or in an affectionate tone, "My dear, did you notice that rug?" or in a jovial way, "You've forgotten the rug, I'll bet my bonnet?" A most provoking thing is that rug, but it is as necessary to gain an entrance anywhere, just now, as the door bell. Next to praising the blessed baby, the most effectual way of gaining an entrance into a woman's heart is by a timely notice of the rug outside. We sometimes think there is a "wiper" at the door of women's hearts; and if your own ever goes into that household, it must first go through the cleaning process.—*Er.*

The Florist.

THE FLOWER GARDEN.

The growing taste for flowers—the desire to make home cheerful and attractive by surrounding it with ornamental trees and plants—is one of the most cheering indications of our rural progress. Who passes a farm-house, built of logs though it may be, around which even a few flowers and flowering shrubs have been tastefully set, but is cheered by the sight, and drawn towards its unknown occupants with a feeling of kindly sympathy and esteem?—There are some unfortunate beings who take peculiar views of life—views bounded by the narrow circle of physical wants, or the yet narrower limits of sordid gain—who sometimes make their boast, in no jesting mood, that of all the flowers to them the cauliflower is the most attractive, or, in their utilitarian conceit, ask “What is the use of flowers?” As we pity the blind, so we pity those who can see no use in flowers. They do have their uses, and not the least of these is their humanizing power.—They refine and elevate; they cultivate our taste, enlarge the boundaries of our thoughts, deepen our love of the beautiful, and quicken all our better feelings.

To the lovers of flowers—to those who, for the sake of the flowers, are willing to take the care and do the labor necessary for their cultivation—we send a word of friendly greeting, and a few hints for their flower garden.

When the frosty nights have disappeared, and the earth has become warmed by the sun, then is the time to sow the flower seeds. Those who can take the trouble to make a frame and cover it with a sash can sow earlier and get their plants more forward than by sowing in the open ground. But there are very many desirable flowers that may well be sown in the open border. That this may be done with the best success, it is of the first importance that the soil be made as light, fine and friable as possible.—To secure this it must be well drained. If the soil be naturally a heavy clay, it will be very much improved by mixing with it considerable leaf mould from the forest and some ashes with sand, if the latter can be had. An excellent fertilizer for all kinds of flowers can be easily obtained by gathering the sods from the fence corners and road-sides into a heap and pouring upon them the soap-suds and slops of the house until they are thoroughly decayed, and then adding a little well-rotted manure. Fresh, unrotted manure should not be used in flower beds.—This should be most thoroughly incorporated with the soil until the whole is light and fine. Many flower seeds are very small and cannot force their way up through the crust of a stiff soil. The finer seeds are best sown upon the bed, and covered by sifting fine mould over them, taking care to cover them only just deep enough to keep them moist.—Much of the disappointment experienced from seeds not coming up is occasioned by planting them too deep. When buried to such a depth, they do not receive warmth enough from the sun to enable them to germinate, and they consequently rot in the ground. Sometimes the seeds do sprout, but the tender shoots have not strength enough to grow up through such a thick covering, and perish before they reach the surface.

After the plants are up it will be necessary to see that they have sufficient room to grow. Where they

stand thick it will be necessary to pull out some, endeavouring always to leave those that are strongest and give promise of making the finest plants. If the ground be frequently stirred, the labour will be amply repaid in the increased growth and vigour of the plants, and the greater abundance and higher perfection of the flowers. If there should not be sufficient rain to keep the beds moist, it may become desirable to give them an occasional watering.—Whenever this is done it should be done thoroughly, not by giving a little sprinkling that will just wet the leaves and moisten the surface, but by giving the ground a good soaking. Use water that has stood in the sun long enough to be somewhat warmed by its heat, not cold water from a spring or cistern. The next day after watering, stir the surface of the soil so that it will not bake and form a crust, and your single watering will be all that the flowers will need unless the drouth be very severe.

By keeping in mind these few simple general principles there will be no difficulty in raising flowers. We give the names of a few of the hardy annuals, which can be easily grown in the open border and will well repay the needed care and attention.

The Sweet Alyssum is such a free flowering plant, although the flowers are small, continuing in bloom the whole summer, and withal is so fragrant that we cannot pass it by.

The Candytuft makes very showy beds. There are purple, white, lilac, and crimson varieties. The plants should be thinned out to about five inches apart.

The Convolvulus Major, or Morning Glory, is of many colours and a very showy climber, but displays its beauties to early risers only.

The Convolvulus Minor is a dwarf variety, growing only about a foot high; the flowers mostly light blue and dark purple.

The Double Green-centred Helianthus is the best of the Sunflowers, and grows about five feet high.

The Marigolds, both African and French, are very showy. Their peculiar fragrance renders them unfit for bouquets.

Of Mignonette every one must have a bed for the sake of its most delightful fragrance.

Evening Primroses make a beautiful display as the sun goes down. Lamarck's Grandiflora is the most showy. The plants should stand from two to three feet apart.

The Drummond Phlox fairly rivals the Verbena in the brilliancy of its flowers and constancy of bloom. From June until severe frosts the bed is covered with showy blossoms of almost every hue, some most delicate in colouring, others dazzlingly brilliant.

The Portulaca is also a very showy flower. The colours are crimson, yellow, white, striped, &c. It does not thrive well in the shade, but flourishes best when fully exposed to the clear, hot sun.

The Petunia keeps up a succession of flowers until the hard frosts of approaching winter kill the plants. Set in beds, with the plants about eighteen inches apart, they soon cover the ground and make a beautiful display.

The Sweet Pea is very fragrant and makes an exceedingly desirable climbing plant. If the blossoms are cut freely it will continue to flower all summer.

The Acroclonium is one of the most desirable everlasting flowers. The colours are bright rose and

pure white. If the flowers are gathered, as soon as they open, and dried, they can be kept in the dark in a drawer or box and used for making winter bouquets.

The *Helichrysum* is another everlasting flower for winter bouquets, large and showy, and of a great variety of colours. The flowers should be cut just before they are fully expanded.—*Ex.*

Grape Culture.

FACTS ABOUT GRAPES.

Knowing that you and your readers value facts more than theories, I present the following :

In the spring of 1865, I planted grape-vines on the southerly side of a close board fence six feet high. The ground was thoroughly worked the depth of a spade blade, and the vines which were hardy plants from layers of 1863, were planted one foot from the fence, as follows : One *Isabella*, one *Diana*, two *Concord*s, one *Hartford Prolific*. The distance along the fence was fifty feet, and the ground was "mulched" for a distance of three feet from the fence with lawn grass, leaves of garden vegetables, corn husks, &c. Good canes were made from ten to fifteen feet in length. These were tacked to the fence, and in the spring of 1866, trimmed and fastened with strips of leather to the upper fence rail, running horizontally about four feet from the ground. The product of 1866 was as follows :

Hartford Prolific, yield fair, in good eating condition August 20th, perfectly ripe August 25th.—Every grape ripened perfectly ; quality not first-rate, but quite a luxury from ripening so early.

Concord, yield large, in good eating condition September 1st, perfectly ripe September 10th. Every grape ripened perfectly, quality first-rate.

Diana, yield fair, in good eating condition September 5th, perfectly ripe September 15th. Some clusters ripened perfectly, some dried in the stem and the grapes wilted and became worthless, perhaps one-fourth were thus lost ; quality of those ripened first-rate.

Isabella, yield large, in good eating condition September 15th, not yet yet perfectly ripe. A few clusters ripened uniformly ; most of them ripened, perhaps half the fruit, the balance is now quite green, no prospect of ripening ; quality of ripening fruit fair.

These vines are all of the same age, have had uniform treatment, have all made a fine growth of canes this year. Next year, I shall carry one line of canes along the upper fence rail, as this year ; another two feet higher, along the line of the top of the fence, making them fast with strips of leather. All fruit-bearing branches this year were allowed to hang down, and about July 1st were clipped off at the third leaf beyond the last cluster. A large portion of the grapes hung near the ground, some clusters actually touching the "mulching," but all were uniformly good when of the same variety. I may add that vines on arbors near by had their fruit entirely destroyed in June by a steel-colored bug.—Not one was seen on the vines by the fence. Next year I intend to extend this "board-fence grape-vine arbor" a hundred feet, and add *Telegraph*, *Delaware*, *Catawba* and *Clinton* vines from layers of 1865.—*Cor. Germantown Telegraph.*

The Dairy.

HOW TO MILK THE COWS.

The first process in the operation of milking, is to make the cow's acquaintance ; give her to understand that the milker approaches her with none other than friendly intentions ; for if he swears, scolds or kicks her, she may give the milker the benefit of her heels, which in my opinion he is justly entitled to.

Before commencing to milk the cow, she should be fed, or have some kind of fodder ; in the enjoyment of the mastication of the same, her attention is withdrawn from the milker's operations ; and the milk is not "held up," as the saying is, but is yielded freely.

The milker should not set off at a distance like a coward, but his left arm should come in contact with the leg of the cow, so that she cannot kick. Before commencing to milk, the teats are to be washed with cold water in warm weather, and in warm water in winter.

The best milker is a merciful man. The udder and teats are highly organized and very sensitive, and these facts should be taken into consideration, especially when milking a young cow, for the teats are sometimes excessively tender, and the hard tugging and squeezing which many poor sensitive creatures have to endure, at the hands of some thoughtless, hardfisted man, are really distressing to witness.

A better milker than even a merciful man is a woman. The principal part of the milking in private establishments, in foreign countries, is done by women ; and in the United States there are thousands of capable women out of employment who might be advantageously employed, in private dairy establishments, as milkmaids.

An indolent person—slow coach—should never be suffered to touch a cow's teat, the process, to say the least of it, is painful ; therefore, the best milker is the one who can abstract the milk in the quickest time.

Finally, milk the cow dry. The last of the milk is the most valuable, yet Mr. *Hurry-up* cannot find time to attend to this matter, consequently he loses the best of the milk, and actually ruins the cow as a milker.—*Dr. Dadd.*

TO BUTTER MAKERS.—As June is the season of the year when those engaged in the dairy business are much troubled by a small fly (well known to housekeepers) getting in their milk and cream, I offer the following simple and efficacious remedy for the removal of the annoyance. Take the leaves of the elder bush, (very common in most localities,) and hang them in several places about your milk room or vault, renewing them as they become old and wilted. You will find yourself rid of a disagreeable vexation, at but small expense of time and trouble. Try it!—*Ex.*

A STEADY FLOW OF MILK.—Regular milking, and feed so as to keep up a good flow of milk, are requisite to successful dairying. When once the milk falls off, it is difficult to regain the supply. Milk regularly then, and as quick as possible, and keep up a steady and good feed.

Gossiping and lying go hand in hand.

The Poultry House.

THE QUALITY OF EGGS.

Few people ever think there is any difference in the quality of the eggs they eat. Yet there is quite as marked a difference as there is in the flesh of the fowls. Fowls that are fed on the finer kinds of cereal grain furnish much better eggs than those that subsist on grass and oats and buckwheat. Wheat, or wheaten dough or bread always makes the richest eggs. C. N. Bement writes on this subject:—"Though most farmers keep fowls and raise their eggs, there are many who have not learned the difference there is in the richness and flavor of eggs produced by well fed hens and those from birds that have been half starved through our winters. There will be some difference in the size, but far more in the quality. The yolk of one would be large, fine colored and of good consistence, and the albumen or white, clear and pure, while the contents of the other will be watery and meagre, as though there were not vitality or substance enough in the parent fowl to properly carry out and complete the work nature had sketched. In order, therefore, to have good eggs, the fowls should be well fed and provided with an abundance of fine gravel, that they may be able to grind and prepare their food for digestion."

In regard to raising chickens, Mr. Bement says: "It is a fact that most old women who live in cottages know better how to rear chickens than any other persons; they are more successful, and this may be traced to the fact that they keep but few fowls, and these fowls are allowed to run freely in the house, to roll in the ashes, to approach the fire, and to pick up any crumbs or eatable morsels they may find on the ground, and are nursed with the greatest care and indulgence. By warmth and judicious feeding, a hen may be made to lay as many eggs in two years as she would under ordinary circumstances in three; and every one knows that a fowl fattened at two years old is much more tender and palatable than one that is older."

PROFITABLE POULTRY KEEPING.—In a recent letter, Mr. Sylvester Lehman, of Schoharie county, sends to the *Rural New Yorker* this report of what he has received the past season from a small flock of poultry: "Last spring I had 36 hens. They began to lay in March. Through the month of June, eight of them set; two of them died in the summer, two I killed, and from the lot up to the first of November, I received 3,600 eggs, or 300 dozen. All who can figure can judge whether or not it pays to keep hens at that rate. The receipt of eggs each month was as follows: March, 100; April, 716; May, 720; June 590; July, 420; August, 556; September 346; October, 152. Breeds—Golden Pheasant and Hamburgs. Feed—buckwheat standing in a box, so that they could eat when they wished.

WHEN hens pick the feathers off each other around the necks, so as to make them bare, it is because they lack something in their food, as animal matter. They may be seen picking at the ends of feathers, thus plucked, from which some substance is extracted. Give them fresh meat, such as liver and lights, which are cheap.

"THE LITTLE GIANT."

In answer to numerous inquiries, let us say a word concerning the "Little Giant Stump Puller," which we recently examined at New Market, N. J., in company with Wm. L. Allison, Esq. of the *Working Farmer*, and Mr. R. C. Parvin, the ingenious inventor and patentee. On the farm of Mr. Merrell, at that place, we had ample field for experiment, tested the machine with thoroughness, and found it entirely efficient. We extracted chestnut, oak, and hickory stumps, the top roots of which were from five to six feet in length, and did this, too, so quickly, and with so little labor, as to quite surprise the lookers on, who had been accustomed to hand work with horse assistance. The machine is very simple, can be easily moved about and managed by two tolerably muscular persons; has been extensively used in the new lands of South Jersey and elsewhere for a year past and given general satisfaction. Its executive ability may be inferred when we state that, at a challenge trial with a certain \$400 machine, propelled by five men and two horses, the "Little Giant" (which costs but \$65), with three men and no horse, came off victorious, pulling 214 stumps during the eight and one half hours occupied by the test. Another "confirmation strong" is found in the fact that Mr. S. Edwards Todd, our accomplished co-laborer in the editorial field (who himself "can make a machine and the machine that makes it"), considered it of sufficient importance to merit special laudation in the illustrated article on implements, which he furnishes for the forthcoming Annual Agricultural Report. We cheerfully add our weight of praise to a labor saving machine so "excellent to have in the country."—*Turf, Field and Farm.*

EARLY CUT HAY FOR COWS, is highly recommended as far to be preferred to that cut when fully matured or "dead ripe." It is claimed to be better than later cut hay with the addition of Indian meal. Indeed the latter is pronounced to be injurious to cows in causing garget and other inflammatory diseases.

It is not generally known that the leaves of a geranium are an excellent application for cuts, where the skin is rubbed off, and other wounds of that kind. One or two leaves must be bruised and applied to the part, and the wound will be cicatrized in a short time.

"THE LAND WE LOVE."—The May number of this popular magazine is at hand, which is the beginning of a new volume. We recommend it to our people. Edited by Gen. D. H. Hill, Charlotte, N. C., \$3 per year.

Why is a newspaper like a wife? Because every man ought to have one of his own.